A DEVELOPMENT PLAN FOR

DOWNTOWN BRAMPTON

A PLAN FOR
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prepared for

THE PLANNING BOARD
OF THE
TOWN OF BRAMPTON

jointly by

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The Chairman and Members of the
Brampton Planning Board.

Attention Mr. B.J. Kenny P. Eng. Director.

July 31, 1967.

Mesdames & Gentlemen:

Re: E.C. 65574 Plan for
Downtown Brampton

We are pleased to transmit herewith 30 copies of a draft of the Plan for Downtown Brampton. It was prepared pursuant to our Agreement dated August 4, 1966, and in accordance with the Terms of Reference defined in our Appraisal dated December 13, 1965.

Prior to final consideration of this Plan by your Board, it is anticipated that a public meeting will be held to describe the proposals to, and canvass the opinion of businessmen and property owners in the Study Area.

It is hoped that this draft will be found to be sufficiently complete and satisfactory for the purposes of such a meeting.

We look forward to an opportunity to discuss this plan with you, and await your further instructions.

Yours very truly,

PROCTOR, REDFERN,
BOUSFIELD & BACON.

J R Bousfield

JRB:mp

J.R.Bousfield, M.T.P.I.C.

ACKNOWLEDGEMENTS

In the preparation of the Downtown Plan, we were very kindly and ably assisted by a number of persons and agencies. The Special Technical Committee, comprising Mr. J. Galway, Clerk-Treasurer, Mr. B. Kenny, Planning Director and Mr. W. Taylor, Town Engineer, reviewed our preliminary proposals and the first draft of this report. This submission reflects their thoughtful and constructive criticism.

Both Mr. Kenny and Mr. Taylor supplied considerable information on existing conditions and Mr. W.C. Chisholm, Consultant to the Brampton Public Utilities Commission very generously prepared the information on water supply and the cost estimates pertaining thereto. Mr. R.V. Doty of Canadian National Railways provided information on present and possible future proposals for rail services through Brampton. To these and to the many others who assisted us, we gratefully acknowledge our debt and express our appreciation.

TABLE OF CONTENTS

Letter of Transmittal i.

Acknowledgements ii.

Table of Contents iii.

List of Plates iv.

I. INTRODUCTION 1.

II. BASIS OF THE PLAN 5.

- 1. Land Use Aspects 5.
- 2. Real Estate Aspects 7.
- 3. Transportation Aspects 8.
- 4. Servicing Aspects 10.

III. THE DEVELOPMENT PLAN 12.

- 1. Land Use Aspects 12.
- 2. Transportation Aspects 20.
- 3. Servicing Aspects 32.
- 4. Physical Design Concept 42.

IV. IMPLEMENTATION 44.

- 1. The Official Plan 44.
- 2. The Zoning Bylaw 45.
- 3. Site Plan Agreements 48.
- 4. Urban Renewal Legislation 48.
- 5. Sequence of Development 50.
- 6. Cost Estimates 51.
- 7. Review 52.

APPENDIX - SURVEYS AND ANALYSES 59.

A. Existing Conditions 59.

B. Future Growth Estimates 102.

LIST OF PLATES

		Following Page
1.	The Study Area	3.
2.	The Development Plan	12.
3.	Sanitary Drainage Areas	32.
4.	Sanitary Sewer Requirements	35.
5.	Storm Drainage Areas	37.
6.	Storm Sewer Requirements	38.
7.	Water Distribution Requirements	41.
8.	Physical Design Concept	42.
9.	Potential Evolution of Main Street	44.
10.	Perspective of Potential Development	45.
11.	Sequence of Development	50.

APPENDIX PLATES

A-1	Existing Land Use	57.
A-2	Deleted.	--
A-3	Detailed Study Area Block Reference	63.
A-4	Building Condition	67.

I. INTRODUCTION

Brampton and its envorons have experienced a fulsome share of post-war Metropolitan growth, and may be expected to do so increasingly in the future. Growth has brought, and will continue to bringe change, not only at the expanding periphery, but throughout most of the urban fabric, including the central business area.

Important shifts in the extent, structure and content of the Brampton Downtown have already occurred, and it is scarcely prophetic to predict others. Unless chaos is to be tolerated, a plan is required where change is occurring. Thus, for the Downtown, the question is not "Whether a Plan?" but rather, "What kind of a Plan?"

A range of possibilities is available. At one end is what might be termed a passive plan, which seeks merely to integrate those minimum changes which will occur without conscious encouragement. The objective of such a plan is essentially preservation, or at most, a gradual evolution. It is most appropriate where the present character is to be maintained, and frequently finds expression in areas where historical or unifying architectural considerations (or both) are paramount. Neither is thought to be the case in Brampton.

At the other end is the active plan, which encourages change, replacement, rejuvenation. The objective is to remake the Downtown in a way that will ensure its continued role as the focus of an expanding urban entity. Between lie many combinations of the objectives of the two polar positions.

The plan which follows is very frankly aimed toward the more aggressive end of the scale, reflecting a conviction that such is the kind of plan that Brampton needs for its Downtown.

Much, perhaps too much, is written about the proportion of non-residential assessment represented in a downtown, and the need to preserve that assessment is cited as the reason for downtown plans and improvements. Assessment is an important reason to be sure, but there are others. Any part of the community is entitled to planning consideration by the municipality, and priority is high where change is great. A downtown constitutes one of the largest centres of employment and surely merits attention on that account. Perhaps most significant however, is the fact that a downtown is the social and economic focus of the community. It affords identity, not only for outsiders but more importantly, for the residents. More than any other single part, a downtown symbolizes the community, and is the expression of its image.

A downtown is essentially a commercial entity, and it should perhaps be emphasized at the outset that it is multi-purpose in its functions. Although popularly thought of as primarily a retail centre, it is that only in part. More properly it should be regarded as a business centre embracing a wide range of commercial activities including personal and professional services, financial establishments, office, community services, building and service trades, transportation and communications facilities, and a host of other uses. While not strictly commercial, public administrative and institutional offices are prominently complementary to the scene. No other part of the community exhibits such variety, generates as much activity, fosters comparable land values, or achieves such universal recognition among the citizenry.

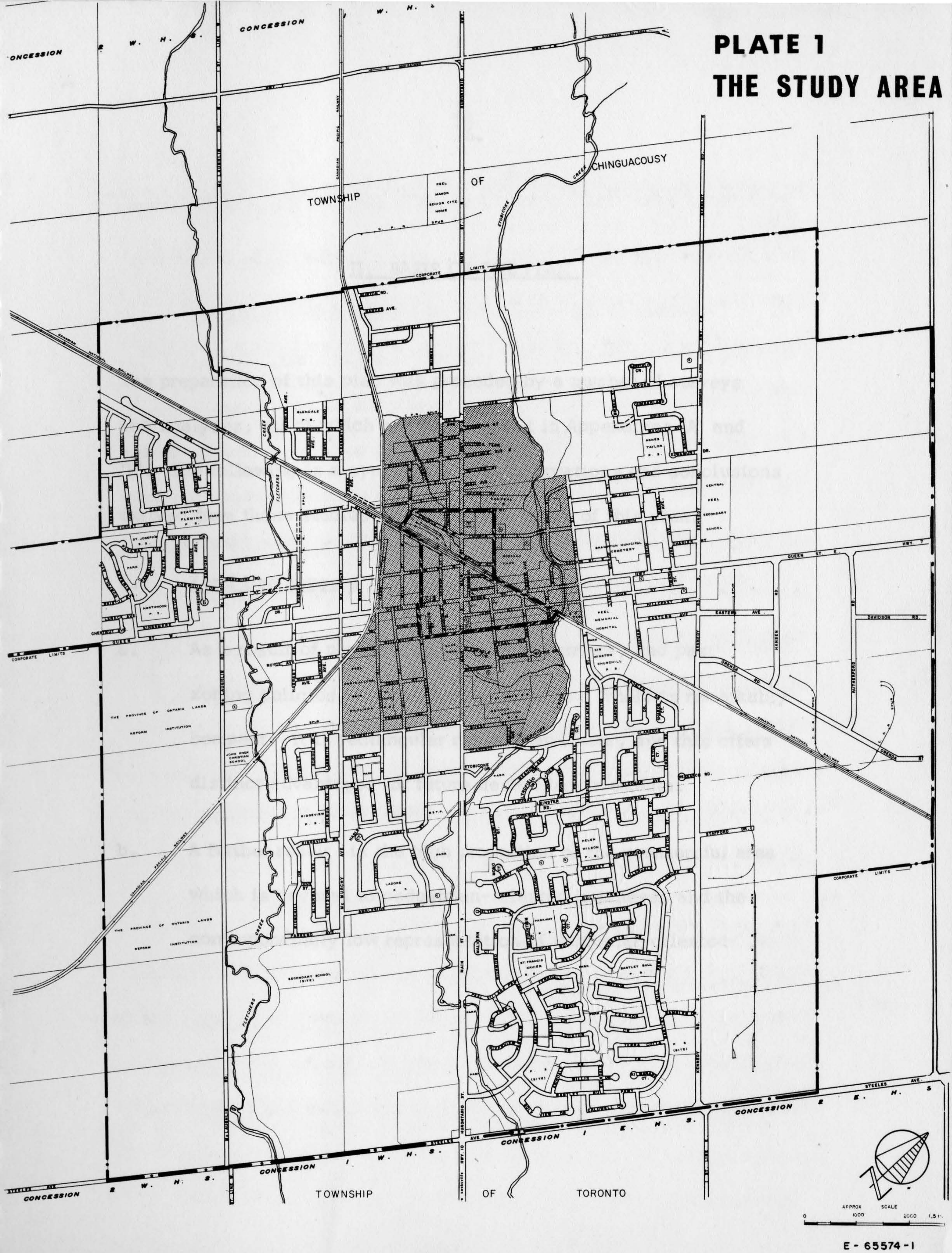
Our purpose here is to prepare a plan which reflects the Brampton's objectives for its changing Downtown, and to describe the means whereby that plan can be implemented. At its best, the plan can be used as a guide by the public and private bodies who will be underwriting the future changes. More frequently, it will be used as a framework within which the merits of alternative proposals can be assessed by public bodies when called upon to bestow approvals of various kinds.

This plan does not purport to be the blueprint for the future Downtown. There are always a number of worthy alternatives, and, as will be described herein, the uncertainties ahead are not so few that a single best course of action can be determined to-day. Continuing review and modification in the light of new circumstances are essential to the successful evolution of the Downtown.

The change in the Downtown will be accompanied by a chnge in the non-commercial area immediately surrounding it. Accordingly, the Study Area includes all of the area bounded on the west by the C.P.R., the north by Dale-Vodden, the east by Centre Street and Etobicoke Creek, and the south by Frederick-Clarence Streets, as shown on Plate 1. Within that, a Detailed Study Area is designated embracing the Downtown commercial area, where the nature and complexity of the problems requires special investigation.

Finally, it should be said somewhere that the importance of physical improvements and public development policies should not be oversold. They are a part, but not the whole, of the future downtown story. Business-men, not public bodies, build a downtown, and its future success remains essentially dependent upon their collective initiative and enterprise.

PLATE 1
THE STUDY AREA



II. BASIS OF THE PLAN

The preparation of this plan was preceded by a number of surveys and analyses, all of which are fully set out in Appendices 'A' and 'B'. The following is a synopsis of the observations and conclusions derived from those studies which form the basis of this plan.

1. Land Use Aspects

a. As a result of physical and artificial barriers, and past zoning policies, the commercial area as a whole is remarkably compact. It is rectangular rather than linear, and this offers distinct advantages for future design improvements.

b. A further result is the high proportion of the commercial area which is devoted to pedestrian-oriented business, and the correspondingly low representation of vehicular-oriented commercial uses which characteristically form the fringe of the Downtown.

c. Densities in the surrounding residential areas are light, and the potential for apartment redevelopment is great. Although still sound for the most part, some residential areas surrounding the core will inevitably face growing **traffic** volumes, and approaching and encroaching non-residential uses. The suitability of the environment for ownership units will diminish, and the buildings themselves will suffer from **increasing** age.

Redevelopment for apartments would ward off incipient blight, fulfil a growing demand for such accommodation, and stimulate business redevelopment in the Downtown.

d. The amount of open space is high and its distribution most fortuitous.

e. Industrial development does not constitute a major space user, or employer in the Downtown.

f. The railroads will remain.

g. The building condition survey revealed substantial structural deficiencies in the case of the commercial area and a generally good standard in residential areas remarkably close to the commercial area.

h. A wide range of community facilities already exists, and space is available for the provision of others.

2. Real Estate Aspects

a. The existing Downtown is solidly entrenched as the major multifunction business centre for theregion. Business is good, growth is evident, and it represents a vigorous base for future expansion.

b. Properties sell well, and land values are firm. The Main-Queen intersection receives the highest values.

c. Despite this, private redevelopment has been slow and future prospects appear to be spotty without a motivating force not now evident.

d. Although demand is brisk, apartment redevelopment has been slight, because it is not economically feasible at the densities presently permitted. A floor space index of up to 3.0 will be required owing to the high quality of many residences, and the conversion to income properties of many others.

e. High land costs will preclude new horizontal multiples (row housing and maisonettes) throughout most of the Study Area.

3. Transportation Aspects

a. The basic road pattern is a grid, and most of the circulation problems arise from interruptions to the grid by the C.N.R. right-of-way and Etobicoke Creek; insufficient provision for the widening of the major streets, expecially at intersections; and the poor physical characteristics of the local streets.

b. The two major arteries, Main and Queen, have so consolidated their built-in importance that neither could ever be closed for Downtown pedestrian circulation. Their traffic volumes can be reduced, however, by off-loading to other streets improved for the purpose.

c. The present amount and distribution of off-street parking provides a good foundation, but will soon require expansion, not only to serve future growth, but to replace curb spaces which must gradually be eliminated.

d. Owing to the physical limitations to lateral expansion, additional parking will have to be provided in multi-storey structures.

e. Traffic signals will increase in number, and will require better spacing.

f. Bus transit will increase, and inter-city bus service will require more substantial facilities.

g. Rail commuter service to Toronto remains a question. Because of the routing of local buses, a Downtown location for the station may be favourably regarded, and a site could be made available for the purpose.

h. The existing commercial area appears to function effectively on about 2.5 parking spaces/1000 sq. feet of floor space.

i. Existing facilities for pedestrian traffic in the Downtown are minimal, and should be improved.

j. Off-street space for servicing and deliveries to and from business premises is not always well provided. Future plans must include provisions to relieve the streets from on-street loading and unloading.

4. Servicing Aspects

a. The sanitary sewer system is basically satisfactory and, with some additions, will be adequate for considerable future growth.

b. The basic storm sewer trunk, the Main's Creek Trunk, is adequate to serve development north to Vodden St., Major relief works will be required for further growth. Existing local sewers are generally inadequate in depth and capacity, and will require replacement.

c. The water distribution system will require major construction of trunk mains to service the redevelopment envisaged.

5. Future Growth Prospects

a. Brampton and adjacent parts of Chinguacousy Township will continue to grow to about 145,000 persons by 1985.

b. The future housing mix will find one third of the new population in apartments or multiple family rental accommodation.

c. About 40% of those people (10,000 persons plus) will live in high density apartments in the Study Area.

d. At the densities anticipated, this will require about 50-55 acres for apartments, (including a vacancy factor) and will have effects on schools and other community facilities.

e. For the commercial area, personal and professional services, business and financial offices, commercial entertainment and community services will be the major growth ingredients.

f. The retail component will increase, stimulated by the growth of other businesses and by adjacent apartment development. Notwithstanding, the Downtown's share of total retail growth in Brampton will continue to diminish as new large plazas open up.

g. Building trades, automotive uses, and the heavier commercial uses will continue to seek locations outside the Downtown. The future of local government administration remains uncertain.

h. By 1985, total commercial jobs in the Study Area are expected to increase from the present 1600 to about 2700, while declining, as a percentage of all commercial jobs, from the present 37% to less than 20%.

i. During the same period, total commercial floor space in the Downtown will increase from the present 636,000 sq. ft. to about 950,000 sq. ft. giving need for over 40 acres of land for commercial uses.

The requirements listed above add up to an increase of about 60% in the commercial component of the Downtown over the next two decades. To the extent that existing buildings are redeveloped, considerably more may be involved by way of new floor space. The residential area surrounding the Downtown will undergo a major transformation.

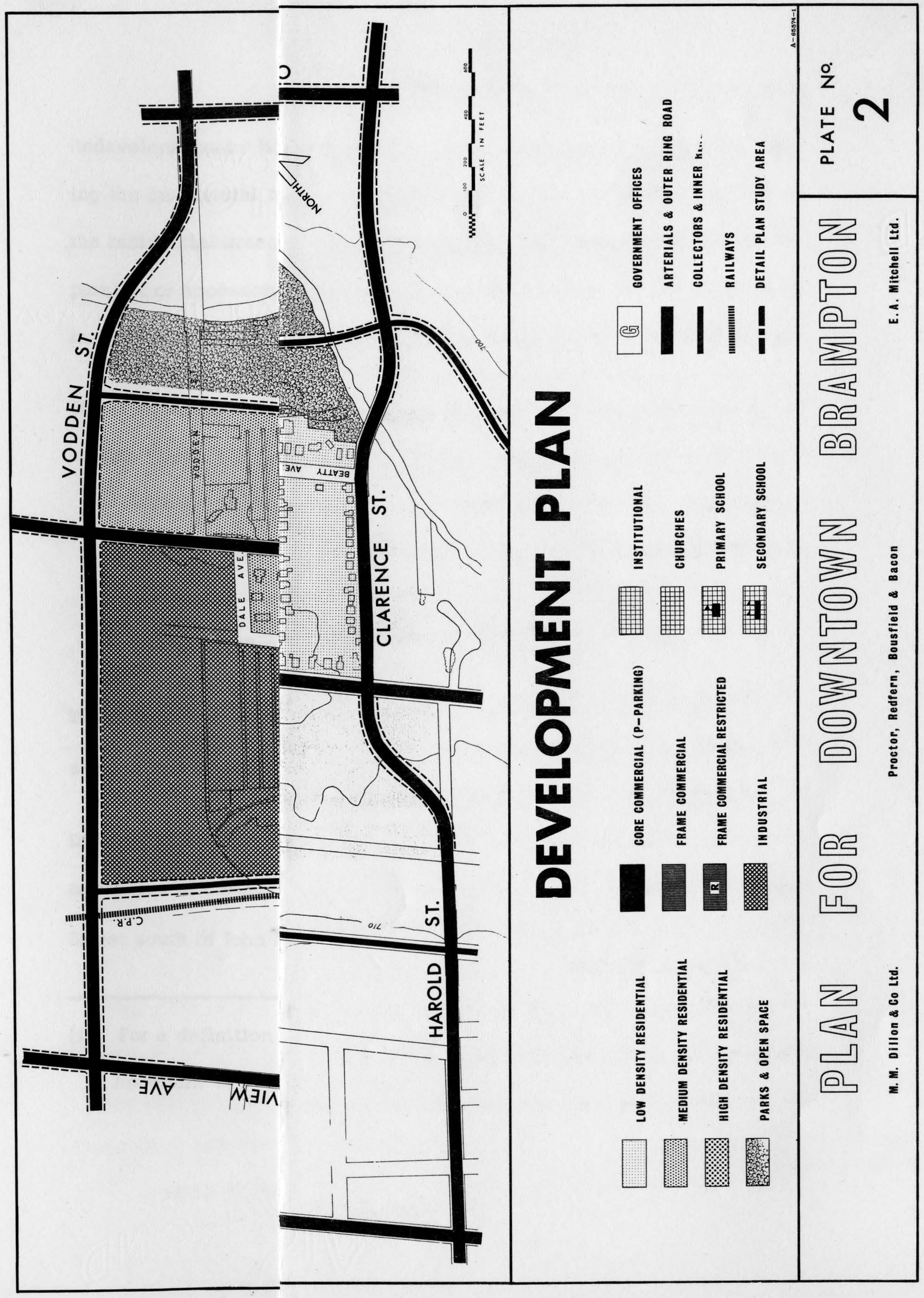
At the same time, this Plan seeks to promote an environment which is more convenient, functional, and attractive for the business patron, businessman, employee, and investor alike, and to ensure the viability of the Downtown as a continuing entity.

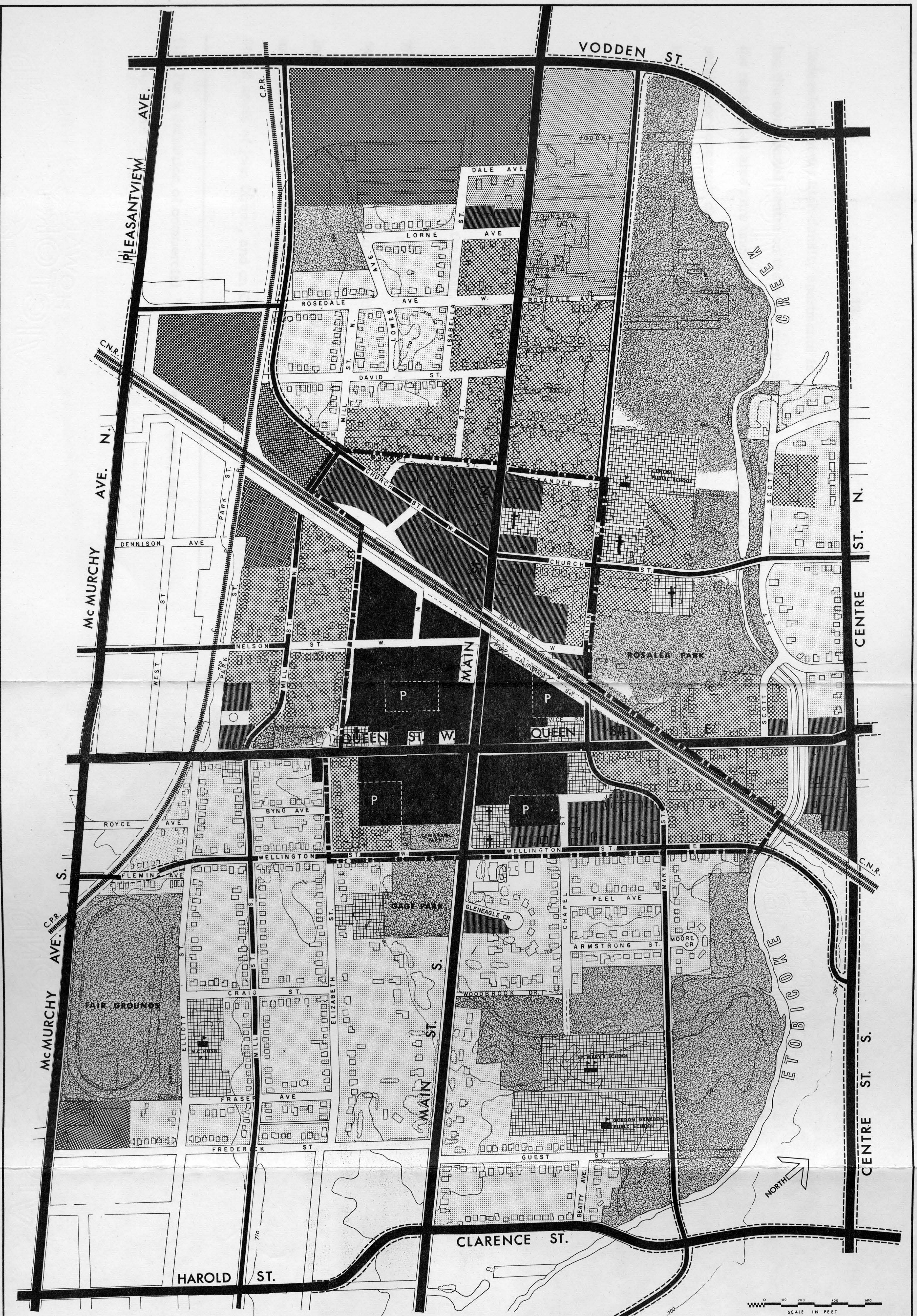
III. THE DEVELOPMENT PLAN

Plate No. 2 is the Development Plan which shows the general pattern of land use proposed, and the major road network required to provide vehicular circulation. The Physical Design Concept (Plate No. 8) presents in rather more detail some possible solutions to problems within the Detailed Study Area.

1. Land Use Aspects

The basic land use concept envisages some lateral expansion to the commercial area, but intensification of use through vertical redevelopment is regarded as most advantageous for the future functioning of the business centre.





DEVELOPMENT PLAN

- ░ LOW DENSITY RESIDENTIAL
- ░ MEDIUM DENSITY RESIDENTIAL
- ▒ HIGH DENSITY RESIDENTIAL
- ▒ PARKS & OPEN SPACE

- ■ CORE COMMERCIAL (P–PARKING)
- ▥ FRAME COMMERCIAL
- R FRAME COMMERCIAL RESTRICTED
- ▩ INDUSTRIAL

- ▦ INSTITUTIONAL
- ▦ CHURCHES
- ▦ PRIMARY SCHOOL
- ▦ SECONDARY SCHOOL

- G GOVERNMENT OFFICES
- ▬ ARTERIALS & OUTER RING ROAD
- — COLLECTORS & INNER RING ROAD
- ┼┼┼ RAILWAYS
- ▬ ▬ DETAIL PLAN STUDY AREA

A–65574–1

PLAN FOR DOWNTOWN BRAMPTON

PLATE No.
2

M. M. Dillon & Co Ltd.　　Proctor, Redfern, Bousfield & Bacon　　E. A. Mitchell Ltd.

Redevelopment for high density apartments is planned closely surrounding the commercial centre on the east, north and west sides. Elsewhere, the residential areas are unchanged. These proposals, together with parallel or accessory changes in the other use categories are described in more detail below.

The commercial area is expanded to include almost all of the land bounded by:

Wellington Street on the south.

Union - Mary Street on the east.

Alexander - Market on the north, and

Elizabeth Street on the west.

The commercial 'core' (1) remains focussed on the Main-Queen intersection and is wholly contained south of the C.N.R.

In keeping with the relatively modest expansion anticipated, a limited expansion of commercial 'frame' (1) uses is indicated north of Church Street south of John Street, and on Centre Street near the Hospital. Where frame uses abut residential uses, eg. along Wellington Street East, it will be important to limit the permitted uses to offices, studios and such, which are attractive by day and quiet by night, and to require special landscaping and rear yard parking provisions.

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(1) For a definition of commercial 'core' and 'frame' uses, see Appendix 'A'.

High density apartment redevelopment is envisaged in four areas:

- Main Street North, on both sides.
- Queen Street East, on both sides near the C.N. overpass.
- Mill Street North, on both sides, north of Queen Street.
- Elizabeth Street South, east side.

If, as and when the green houses north of Rosedale Avenue East are redeveloped, the area may be suitable for medium density horizontal multiples.

A continuation of the existing low density (ownership) pattern is recommended for the remaining residential areas. Structurally sound, attractive, and not required for higher density uses during the period covered by this plan, these should remain as areas of stability.

The whole of the Etobicoke Creek valley should be added to the inventory of public open space. In the north west quadrant of the Study Area, which is the most remote from existing open space, it will be necessary to purchase parkland, beginning with any available vacant land, to accommodate the population increase anticipated. The total acreage is expected to be wholly adequate to accommodate any new or expanded recreational facilities.

No expansion of industrial uses is provided for, and, in fact, most of the existing uses, including all those south of the C.N.R. and east of Mill Street are expected to be redeveloped by 1985.

Institutional uses such as churches are expected to continue, and may well expand. This is essentially unpredictable in this Study, but it should be emphasized that this Plan does not preclude the possibility. The expansion of public institutional uses is also beyond prediction, but it may be stated that appropriate locations can readily be found when specific requirements are known.

Special mention is owing the question of future school accomodation. following table summarizes the anticipated effects on the public elementary schools assuming:

- North of Queen Street - All redevelopment is tributary to Central School.
- South of Queen and east of Main, to Gordon Graydon.
- South of Queen and west of Main, to McHugh
- apartments at the density contemplated (130 suites/acre), will yield 0.12 K-8 public elementary pupils/suite.
- houses demolished will yield 0.8 pupils/dwelling unit.
- having in mind the 50% vacancy factor, only 2/3 of the apartments will be built in any area by 1985.

SUMMARY OF EFFECTS OF APARTMENT REDEVELOPMENT ON PUBLIC ELEMENTARY SCHOOLS

School	2/3 Pot Apt. Units	No. Pupils @0.12	2/3 Exist. Housing Demol.	No. Pupils @ 0.8	Net Increase	Additional Classrooms
Central	4000	480	210	170	310	9
Graydon	700	84	48	38	42	1
McHugh	250	30	20	16	14	-
	4950		278			

It will be observed that only Central School is materially affected. This Plan contemplates that the existing building will be razed when the Union Street extension is put through, and a new school, adequate in size to meet future growth, will be erected on the east side of Union Street north of the Church. The playing field will remain unchanged, and the old site can be used for high density apartments.

It is assumed that all the redevelopment area will be tributary to St. Mary's Separate School. Further assuming 0.04 separate school pupils per high density apartment unit, and 0.27 pupils per existing house demolished, the effect is calculated as follows:

2/3 Pot Apt.Units	No. Pupils @ 0.04	2/3 Exist. Houses Dem.	No. Pupils @ 0.27	Net Increase	Classrooms
4950	200	278	78	122	3-4

Assuming similar criteria for secondary schools, a net increase of 122 high school pupils would have to be accommodated at Brampton High School, or elsewhere in the system.

It should be emphasized that the above ratios are those found to be the result in parts of Metropolitan Toronto where apartments at such densities have been erected. There is of course, no experience in Brampton to go on. The reliability of such criteria is in doubt, and will remain so until some apartments are actually built and the bedroom counts can be related to the numbers of school aged pupils generated.

Before concluding the discussion of future land use, mention should be made of the possibilities of mixing uses in the same building. For example, there is no reason why convenience stores cannot be included in apartment buildings if tastefully designed. Where apartments closely abut commercial areas or parking facilities, there would appear to be considerable merit in the use of the lower floors for shops, studios and offices providing servicing problems can be overcome in the building design. In the commercial core itself, a favourable view may well be taken towards apartment towers over a shopping or office concourse. Life and activity would thus be added to the Downtown Scene, and use would be made of the parking facilities during off-peak hours.

It is to be expected, and hoped, that the coming years will see a much more experimental approach toward the mixing of uses and a reversal of the policies which have dominated North American planning thought for years. This plan advocates a very flexible attitude toward such proposals if and when any materialize.

Finally, the avenues of further expansion beyond the time period covered by this plan must be considered . For apartments, continuing pressure on Main Street south of Gage park is perhaps only to be expected. However, the most obvious areas are Scott Street, (where one building has already located), Rosedale Avenue West, and the Byng Avenue area.

For the commercial area, in all probability core uses will, in time displace some of the frame uses north of the C.N.R. Essentially, however, major expansion over the long term is expected to be vertical rather than lateral in the centre of the Downtown.

The following table compares the existing land use acreages with those proposed on Plate 2.

SUMMARY OF LAND USES IN THE STUDY AREA

CATEGORY	ACREAGE (Approx.) EXISTING	 PROPOSED (PLATE 2)
Residential		
Low density	201	119
Medium density	3	21
High density	5	65
Sub-total	209	202
		ACREAGE (approx.)
Commercial		
Core type	16	28
Frame type	13	27
Government and Institutional	28	31
Open Space	97	100
Industrial	49	40
Totals	621	633*

* Additional acreage includes street closings.

2. Transportation Aspects

The Transportation plan described herein has been developed in accordance with the objectives referred to earlier in this report, together with the goals and standards detailed in the "Brampton Area Transportation Planning Study", which produced a plan for roads throughout the Town and environs.

a. Road Improvements

The street pattern recommended to serve the land use proposed is shown on Plate No. 2. The general purpose of major road improvements must be to emphasize and strengthen the grid pattern of streets and to develop the required traffic capacity on arterial and collector streets.

The overriding need in Downtown Brampton is to rationalize the street system. By this is meant:

i. Defining street function and classification of arterial, collector, and local streets.

ii. Providing alignment and continuity in accordance with function. e.g. local streets can be short, a few blocks long, but arterial streets should be continuous for at least several miles.

iii. Providing pavement width and intersection layouts to develop adequate traffic carrying capacity for each street.

All these items should be included as part of the Plan for Downtown.

The numbered provincial highway routes (No. 7 and No. 10) use Queen and Main Streets because these are part of the original route pattern in the region. Most of the commercial, industrial, and governmental uses for miles around are firmly attached to these two main streets. While these two main roads will retain their importance, however, the very factors which contribute to that importance tend to restrict or even strangle the roads as far as their real usefulness as traffic carriers.

The objective for Downtown Brampton must be to off-load as much as possible of the heavy traffic from Queen and Main Streets, and integrate and co-ordinate them with the environment and amenity requirements of Downtown, while at the same time maintaining capacity for the "through" traffic, which essentially has to travel these major routes.

Queen Street and Main Street should be maintained as important arterials. They should be provided with good 4-lane capacity approaching downtown (50' face to face of curbs) and unnecesary connections and driveways eliminated. All curb parking should be removed within the Downtown area, and the available roadway should be divided between the moving vehicles and the moving pedestrians. Where there is only 66 - ft. available between the opposing buildings, 4- 11 ft. traffic lanes should be provided with 11 ft. sidewalks on either side.

Within the general framework of the grid pattern of major streets in Brampton, the Downtown Area will fit in between the four arterials to be formed by:

- Vodden Street and its westerly extension
- McMurchy Avenue South and North, and the northerly extension via Pleasantview Avenue.
- The Harold Street/Clarence Street route formed by elimination of the job connection at Main Street
- The Centre Street South and North route formed by the connection of Harper Street and Sterne Avenue, and the projection of Centre Street northerly to Vodden Street.

The following streets should be improved by widening, realignment, and extension, to give collector street service to the Downtown Area:

- Mill Street South and North, with grade separation at the C.N.R. and jog elimination at Queen.
- Church Street West and East .
- Union extended north to Vodden, and linked by a new connection. to Mary Street which is to be extended south of Clarence Street.
- Wellington Street extended west and east to McMurchy and Centre Streets respectively.
- Nelson Street West extended north and west of McLaughlin Avenue via Flowertown Avenue.

Plate 2 also shows a number of changes proposed to local streets to improve internal circulation. In the commercial area,

- George Street, between Nelson Street and Wellington Street is to be closed and incorporated into the parking and service drive system within the blocks.
- California Street is to be re-aligned to intersect Main Street opposite Nelson Street West.
- John Street is to be closed between Main Street and Chapel Street and incorporated into the parking area.
- Chapel Street will be closed at Queen Street. The fire hall will derive its access from the new Mary Street diversion.

- Intersection improvements are recommended at Elizabeth and Queen, Market and Church, and Alexander and Main.

In areas designated for apartment redevelopment, a number of street closings may be possible depending upon land assembly. They are:

- Junction Street
- James Street
- Maple Avenue
- parts of John Street and Mary Street
- Joseph Street
- Ellen Street
- Bird Avenue
- William Street.

b. Traffic Control

Traffic signals should be installed at all intersections of:

Arterials with arterials
Arterials with collectors
Collectors with collectors.

The spacing of signals should be conducive to the setting up of signal progressions (a 600-ft. spacing module is recommended). Signal equipment should be modern, flexible, and capable of expansion and interlinking with a master control or a computer.

Operation and circulation of traffic in Downtown Brampton will become more and more dependent upon the use of traffic signals at all major intersections. Many sophisticated techniques such as continuous sampling of traffic volumes, and computer control of signal progression are now available for getting the best possible capacity from signalized intersections, and it is likely that Brampton traffic controllers will someday avail themselves of these features.

As a matter of immediate planning however, it is vitally important that the Downtown intersections should be designed with these future possibilities in mind. Specifically the following features should be included.

i. Major intersections should have four approaches at right angles. Where T-intersections are unavoidable, the main street should be straight and the side street should approach at 90 degrees besides meeting the following criteria.

ii. Spacing of traffic signals should be regular, and the distance between adjacent signalized intersections on any route should not be less than 600'. (The present spacing of 400' between signals at the Main/Queen and George/ Queen intersections is the cause of some of the existing problems in Downtown Brampton.

iii. The width, alignment and grade on the approaches to signalized intersections, should be in accordance with the geometric standards of the City Engineers Association and the Canadian Good Roads Association.

Ultimately there will be up to 30 traffic signal installations in Downtown Brampton. Specific recommendations for some of the first of these were contained in the Department of Transport Report dated March 1962. Others will be installed as and when they are warranted.

c. Transit

As Brampton grows, the need for local bus service will increase. The precise pattern of future local bus movements is currently the subject of some speculation. High intensity nodes such as the major C.B.D. intersection, commuter rail station, the Bramalea Town Centre, a group of important industrial plants, grouped apartment development and major senior schools, will certainly require bus service, but it is not now possible to state just how such service will be provided.

As far as it concerns the present Plan, it should be sufficient to provide some areas close to the major intersection where bus passengers may board and alight without interference with traffic movement.

The Grey Coach buses serve Georgetown, Brampton and Toronto as well as providing connections to longer distance bus services. It is likely that this bus traffic will increase, and that terminal facilities more substantial than the present George Street stop will eventually be required. It is suggested that a site on the north side of Nelson Street West near George Street would provide suitable accommodation. At some future date however, detailed discussions with the bus operators should be undertaken to determine their precise requirements and their contribution to any scheme.

It is clear that commuter train service between Brampton and Toronto is in prospect for the 20 year period. Almost any point on the existing C.N.R. tracks between Mill Street and Etobicoke Creek would be suitable for a commuter station, the main considerations being the proximity to high density residential uses (600 ft. - 1000 ft. radius suggested), the parking and access which could be provided cheaply and adjacent to the station, and potential connections to the local bus transit system.

d. Parking

Downtown Brampton will be affected by increasing volumes of moving traffic during the coming years and the practice of curb parking will have to be gradually eliminated on all but the very minor peripheral streets. Thus, practically all of the future parking requirement in Downtown Brampton will need off-street accommodation, and in view of the physical barriers bounding the area it is apparent that several parking structures will be required.

The commercial floor space is expected to increase to more than 950,000 square feet, which will require a substantial increase in the parking provision. The current ratio of parking spaces to floor space of about 2.5 spaces/1000 square feet appears to be satisfactory. Having in mind that future commercial growth is expected to be in offices and services rather than in retail facilities, it is expected that similar ratio will be adequate for the future. On the basis of 2.5 spaces/1000 square feet of floor space, 950,000 square feet will require about 2400 spaces.

As shown on Plate 2 is it recommended that provision be made for a parking structure with a capacity of 500-600 vehicles in each of the four major quadrants of the Commercial Core.

The majority of the required new parking spaces should be provided in parking structures designed integrally with the Downtown uses they serve. This provision should coincide with the progressive removal of curb parking throughout the Downtown Area.

It is not clear at this time whether future parking provisions will be the responsibility of private owners or municipal authorities, and this will influence the manner in which provision is made. It is evident however, that if redevelopment takes place on a large and comprehensive scale through land assembly, pedestrian, parking, and commercial uses can be designed in co-ordination.

e. Pedestrians

In many respects the pedestrian is the most vital element in a Downtown Area. At the same time pedestrians in reasonable numbers are far more flexible and manoeuverable than vehicular traffic - they can turn sharp corners, negotiate through narrow passages, and if necessary change levels, up or down from the ground in quite a short distance. Although the plan can make use of these characteristics in suitable situations, it is not wise to subject the pedestrian to too much "forced movement". The Downtown wishes to attract pedestrians and should not subject them to inconvenience, discomfort and hazard. Rather it should seek to provide an attractive environment which will encourage them to come often, make use of the stores and facilities, and derive pride and pleasure from their municipal centre.

Under present conditions, the pedestrian facilities are almost entirely confined to the sidewalks and store fronts facing the major streets. There are a few service alleys between stores which connect to the parking lots behind, and one or two buildings have provided rear entrances for patrons to enter directly from the parking. Design work undertaken for Downtown Brampton should tend to emphasize this latter idea along with other elements of pedestrian amenity, including such things as park benches outside the bank buildings, views of the parkland, and separation of the conflicting pedestrian and vehicular movements. The provision of pedestrian ways and precincts, as well as the linking of the blocks with overpass or underpass structures, should be incorporated in future plans as and wherever they are feasible.

It has been mentioned earlier, that, whereas the right-of-way is restricted to 66' through the developed central area, the available width should be shared in such a way as to provide 2 - 11 ft. sidewalks.

f. Truck Service and Access

It is anticipated that in future loading and unloading of merchandise, deliveries of oil and supplies, and pick-up of refuse, will take place at the rear or in the interior of buildings. None of these services should in future be provided from the pavement or sidewalks of arterial and collector streets.

3. Servicing Aspects

a. Sanitary Sewers

General

As noted in Apendix 'A', the existing sanitary sewer system is old and some replacements will be necessary to serve the planned redevelopment in Downtown Brampton. Determination of the sewers to be replaced was predicated on condition and capacity. Condition is discussed in the Appendix. The capacity requirement is based on the ability of the existing system to accommodate the expected sanitary flow from the redeveloped Downtown Area, plus any other area that must be served through it.

Design Criteria

The present sanitary drainage situation is illustrated on Plate 3. With the completion of trunk sewers up the Etobicoke Creek and Highway No. 10 to Steele's Avenue, Areas 4, 5, 6 and part of 3 will be diverted from the Main Street Trunk thereby reducing the sanitary drainage area to the shape shown by the dashed lines on Plate 3. This future anticipated area was used in the calculations for determining sanitary sewer sizes.

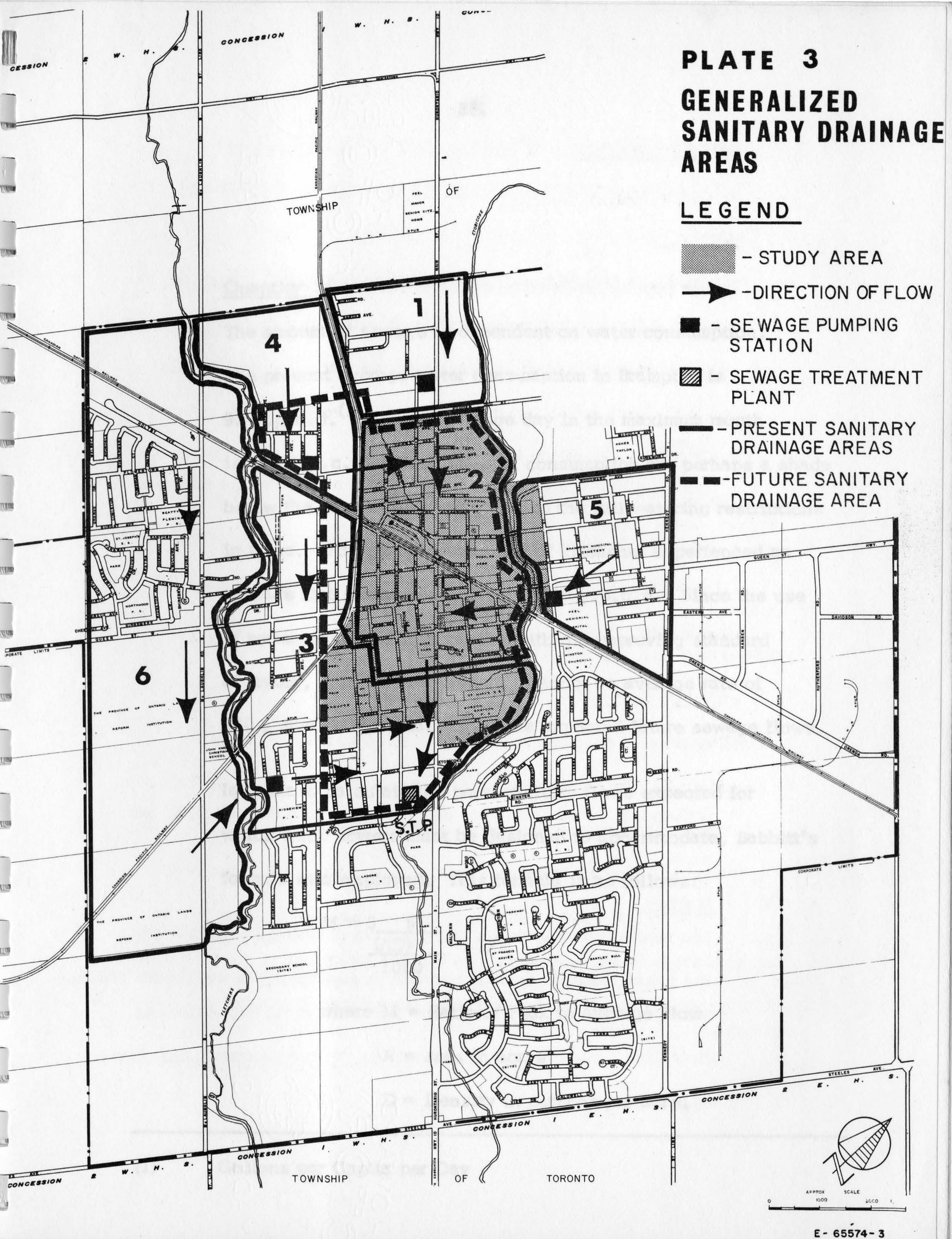


PLATE 3

GENERALIZED SANITARY DRAINAGE AREAS

Quantity

The amount of sewage is dependent on water consumption. The present average water consumption in Brampton is 92 g.p.c.d.(1) and the average day in the maximum month is 135 g.p.c.d. These rates of consumption are perhaps a shade below the general average owing to the full watering restrictions in force. For example, the City of Kitchener experienced an average rate during 1966 of about 110 g.p.c.d. Since the use of water continually increases with the improving standard of living, it is thought prudent to adopt an average rate of 120 g.p.c.d. for establishing the expected future sewage flows.

In order to calculate the peak sanitary flows expected for which trunk sewers must be designed to accommodate, Babbitt's formula was employed. This formula is as follows:

$$M = 5 \; \frac{5}{\frac{(AD)}{1000}^{\;1/5}}$$

where M = Ratio of Peak to Average Flow

A = Area in acres

D = Density in persons per acre.

---

(1) Gallons per Capita per Day

The population densities used in our calculations are as described in the section on land use, and as shown on Plate 2.

Flow

Thus the expected sanitary flow can be calculated as follows:

$$q = \frac{FDM}{540,000} + i$$

where q = Sewage Flow in c.f.s. per acre

F = Average Daily Flow = 120 g.p.c.d.

D = Density

M = Ratio of Peak to Average Flow

i = Infiltration

Infiltration was assumed to be at the rate of 0.0024 c.f.s. per acre.

Method

The procedure followed in the analysis consisted of subdividing the future sanitary drainage area into smaller areas consistent with the existing sewer network and then calculating the accumulating flow from these areas, thereby arriving at the required trunk sewer capacities.

The internal drainage areas, the new sanitary sewers required and the existing sanitary sewers that are adequate to meet future conditions are shown on Plate 4.

Some observations can be made:

- The Main's Creek Trunk has been designed with capacity and grade to serve 80 acres west of the C.P.R. by gravity.
- The replacements on Main Street and Queen Street are necessitated primarily by condition rather than by capacity.
- The section of 24" sewer on Nelson Street between Main Street and George Street will likely be one of the last replacements because its capacity is only 20% less than that required for complete development.
- The Main Street Trunk Sewer south of Wellington Street will have approximately double the required capacity once the peripheral areas are diverted.

Cost estimates of the new sanitary sewers required to serve the redeveloped area are outlined in Chapter IV.

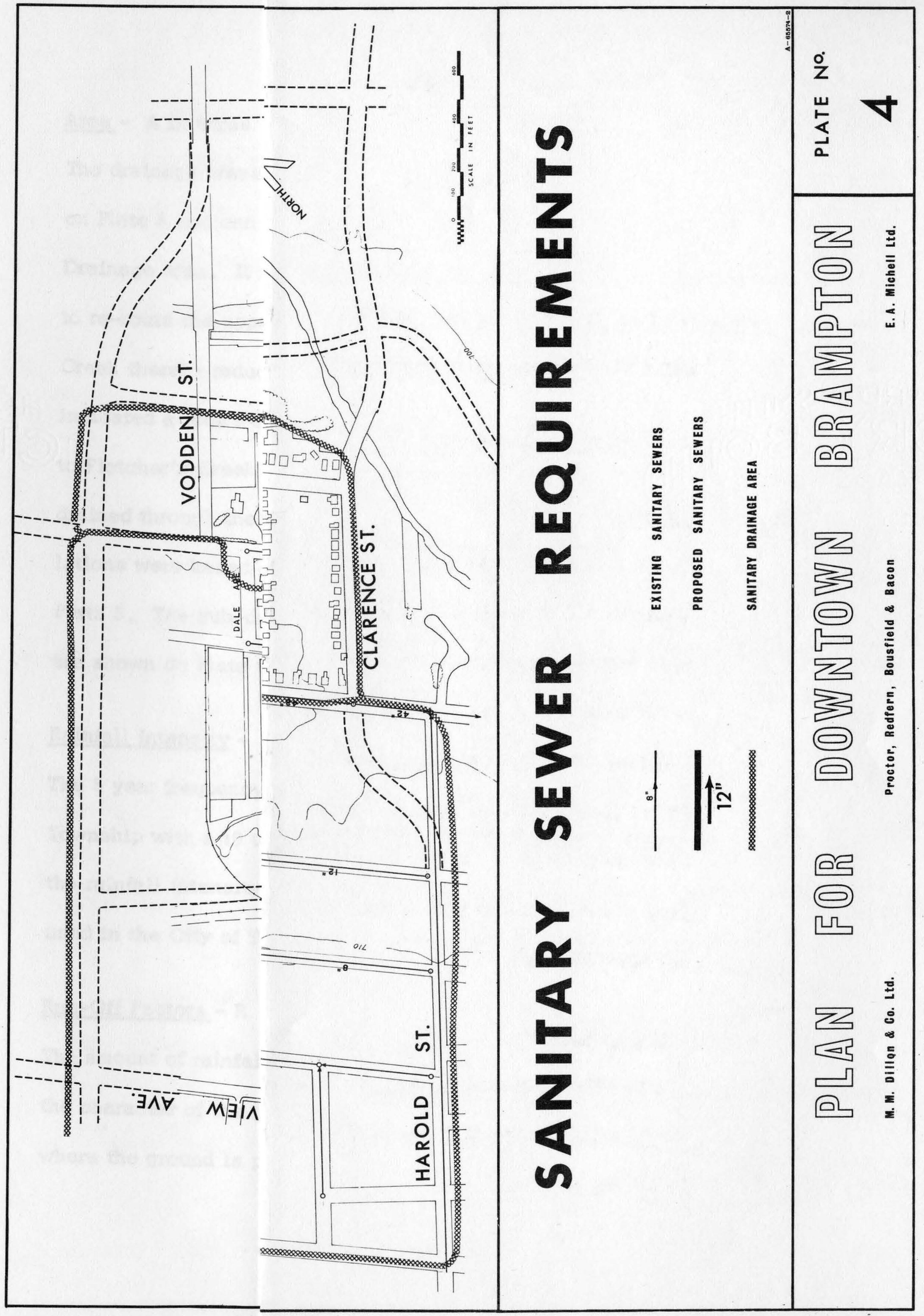
b Storm Drainage

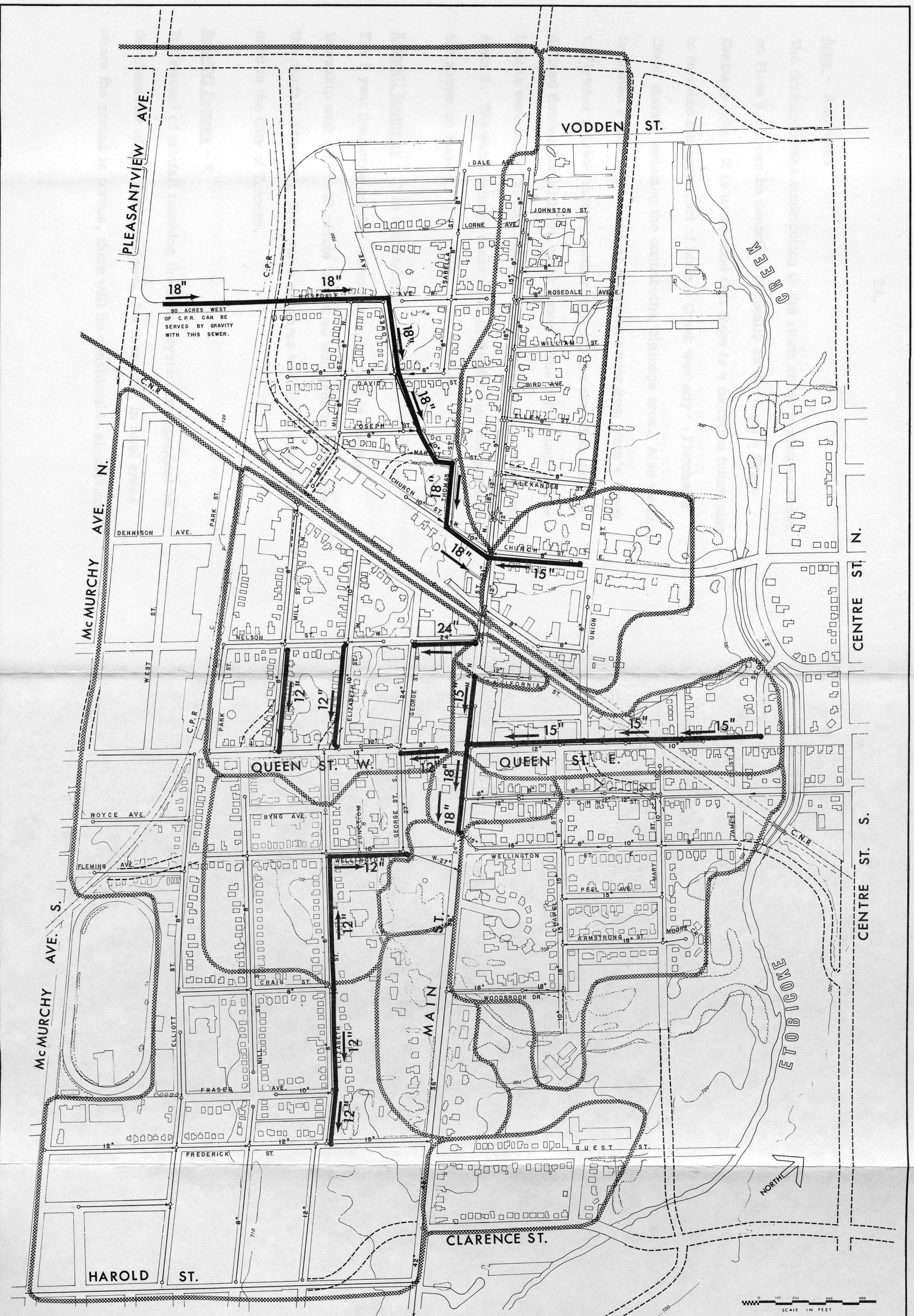
General

The existing storm drainage system has been described in Appendix 'A' where it was pointed out that three trunk sewers were adequate to continue to serve the redeveloped area. These are the sewers on Main Street (the Main's Creek Trunk), California Street, and George Street. The sewer on Mary Street should also be kept in service. In the determination of future requirements, it was assumed that those sewers would play a part, and that new storm sewers would be required on all other streets.

Design Criteria

The required storm sewer system for the Study Area was designed using the Rational Method (Q=A I R) based on the following criteria:





SANITARY SEWER REQUIREMENTS

8" — EXISTING SANITARY SEWERS

12" → PROPOSED SANITARY SEWERS

▨ SANITARY DRAINAGE AREA

A-65574-2

PLAN FOR DOWNTOWN BRAMPTON

PLATE No. 4

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Area - A in acres

The drainage areas contributing to the storm sewer system is shown on Plate 5 and can be described generally as the Main's Creek Drainage Area. It is understood that there is a tentative future plan to re-route the upper part of Main's Creek westerly to Fletcher's Creek thereby reducing the contributing drainage area. Also we have indicated a future 84" diameter diversion sewer from Main's Creek to Fletcher's Creek thereby further reducing the area that must be drained through the Main St. trunk sewer. The subsequent calculations were based on this reduced future drainage area as shown on Plate 5. The sub-drainage areas used in the detailed calculations are shown on Plate 6.

Rainfall Intensity - I in inches/hour

The 5 year frequency rainfall curve currently used in Toronto Township with a 10 to 15 minute inlet time was used to determine the rainfall intensity. This curve compares with the 5 year curve used in the City of Toronto.

Run-Off Factors - R

The amount of rainfall reaching the sewer system is dependent on the character of the ground surface. For instance, in rural areas where the ground is porous, there will be considerable absorption resulting in a light run-off as low as 20%. But in an urban commercial area, where there is a high percentage of impervious surfaces such as paved parking lots, the run-off will be as high as 90%. With cognizance of the future land use proposals for Downtown Brampton the following Run-off Factors were employed:

Commercial	-	90%
Apartments	-	80%
Residential	-	60%
Open Spaces	-	20% to 30%

Future Storm Sewer System

Very early in the study it was recognized that the existing Main's Creek Trunk Sewer would not have capacity to carry the total future flow expected from the reduced Main's Creek drainage area, i.e. after the northerly part of Main's Creek is re-channelled to Fletcher's Creek as shown on Plate 5. Therefore the flow to the Main's Creek Trunk must be limited and other outlets established for the surplus flow.

This can be accomplished by developing two outlets as follows:

(1) The Fletcher Creek 84" diameter diversion sewer which will serve the area north of Vodden Street.

(2) The Elizabeth Street outlet to the Etobicoke Creek which

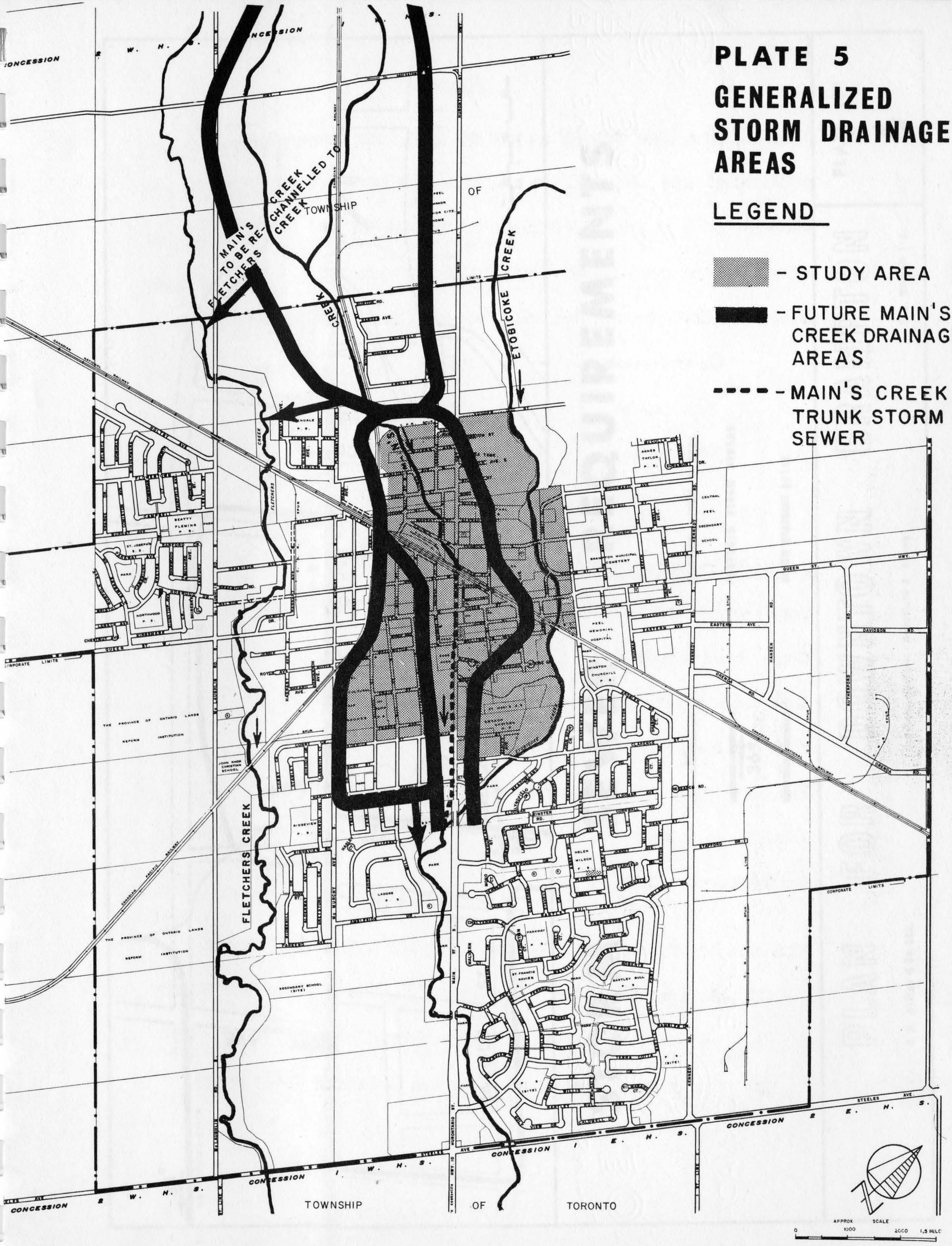
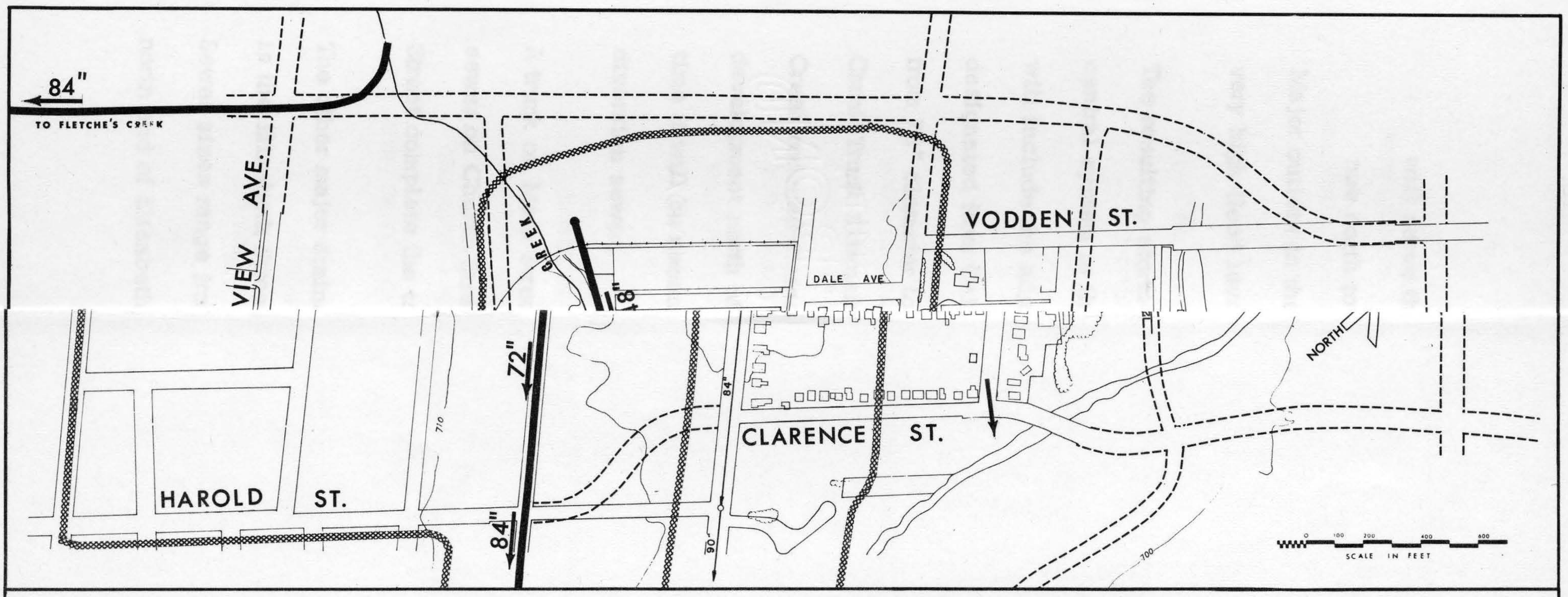


PLATE 5

GENERALIZED STORM DRAINAGE AREAS



STORM SEWER REQUIREMENTS

84" → EXISTING STORM SEWERS

36" → PROPOSED STORM SEWERS

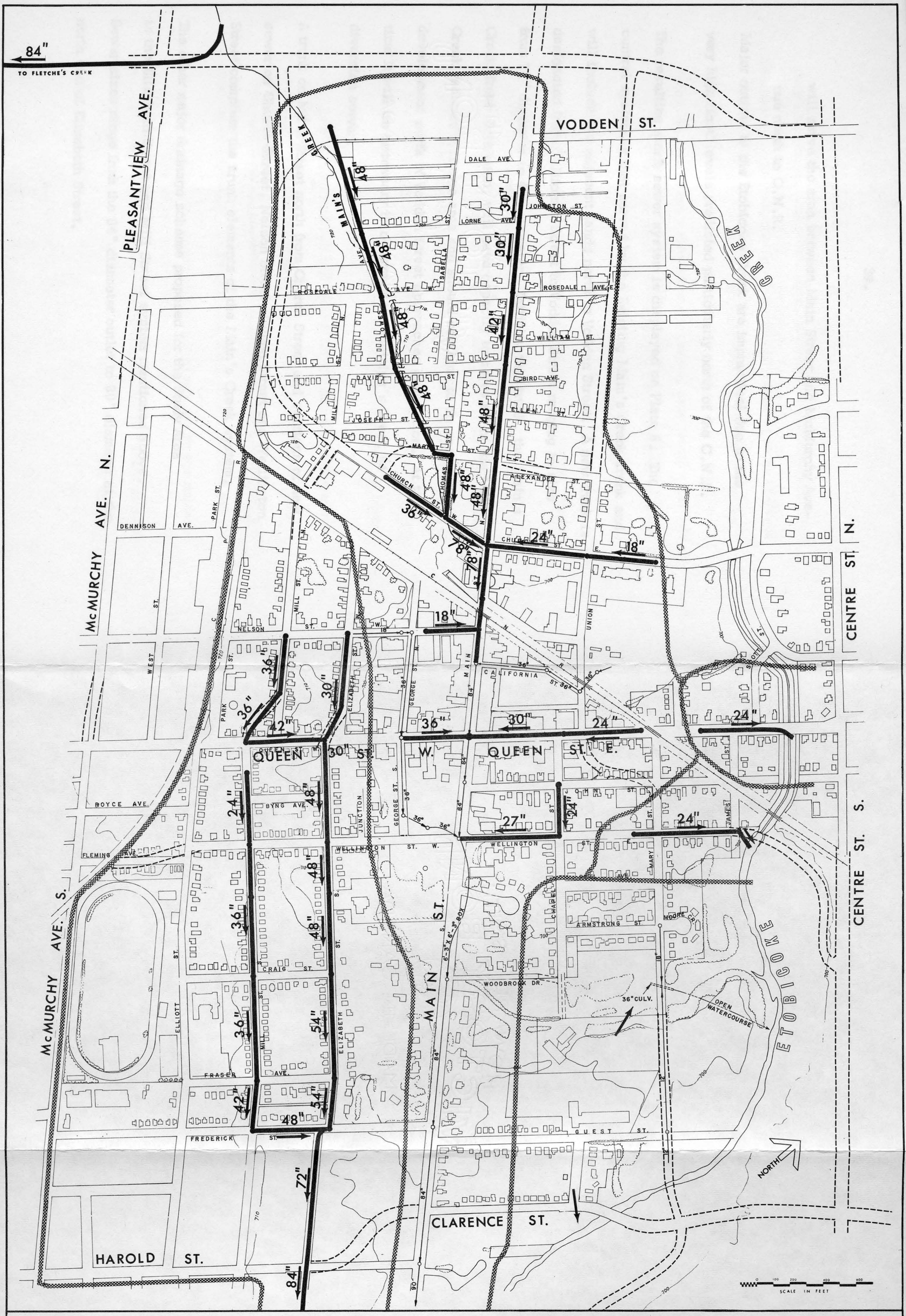
▨ STORM DRAINAGE AREAS

A-65574-3

PLAN FOR DOWNTOWN BRAMPTON

M. M. Dillon & Co. Ltd. Proctor, Redfern, Bousfield & Bacon E. A. Michell Ltd.

PLATE No.
6



STORM SEWER REQUIREMENTS

84" — EXISTING STORM SEWERS

36" — PROPOSED STORM SEWERS

▨ STORM DRAINAGE AREAS

A—65574—3

PLAN FOR DOWNTOWN BRAMPTON

PLATE No. 6

M. M. Dillon & Co. Ltd. Proctor, Redfern, Bousfield & Bacon E. A. Michell Ltd.

will serve the area between Main Street and McMurchy Avenue north to C.N.R.

Major outlets to the Etobicoke Creek are impractical due to the very high flood levels predicted particularly north of the C.N.R.

The resulting storm sewer system is displayed on Plate 6. The central system is that served by the Existing Main's Creek Trunk and will include the adjacent lands north to Vodden Street. A new trunk is designated from California Street to Vodden Street ranging in size from 78" diameter to 48" diameter. Initially this trunk, the Main's Creek Trunk Extension, will have capacity to serve all of the Main Creek reduced drainage area and should continue to do so until development north of Vodden Street approaches completion. At that time it will be necessary to construct the Fletcher's Creek 84" diversion sewer.

A trunk on Main Street north from Church Street and sections of new sewer on Church Street, Nelson Street, Queen Street and Wellington Street complete the trunk elements of the Main's Creek system.

The other major drainage scheme proposed for the Study Area is the Elizabeth Street and Mill Street system mentioned above. Sewer sizes range from the 84" diameter outlet to 30" diameter at the north end of Elizabeth Street.

Two short lengths of sewer on Queen Street and Wellington Street draining directly to the Etobicoke Creek complete the required new trunk storm sewers to serve the Study Area.

The Mary Street area presently served with a road drain on Mary Street is primarily open space and will drain satisfactorily to the Etobicoke Creek as at present.

Lateral sewers were not considered in this Study.

In order to ensure proper operation of the separate storm sewer system described, it will be necessary to carefully disconnect all the catchbasins at present draining to sanitary sewers and re-connect them to the storm sewer system. New catchbasins should be installed as required.

All the existing storm drains except the three to be retained will be cut-off and abandoned as the new system is constructed. The first to be abandoned will be the drain on Queen Street and the old box section on Main Street north of California Street both of which are at present in the design stage.

Cost estimates of the proposed storm sewers are outlined in Chapter IV.

c. Water Supply and Distribution

A brief description of the existing water situation outlined in Appendix "A" indicate that some improvements will be required to adequately serve the redeveloped Downtown area.

An average water consumption of 120 g.p.c.d. with a maximum daily consumption of 240 g.p.c.d. has been established as the criteria for long range planning. On this basis the 1985 average water demand for the Town of Brampton and environs will be approximately 17.5 M.I.G.D. and the maximum demand will be approximately 35 M.I.G.D.

Obviously the existing water supply of 2.0 M.I.G.D. will not be adequate. A future supply from Lake Ontario operated by the O.W.R.C. to serve the South Peel County Area is now under negotiation.

Assuming that a Provincial water supply scheme will be implemented a bolstering of arterial mains in the Downtown area will be required. These are shown on Plate 7.

Cost estimates are tabulated in Chapter IV.

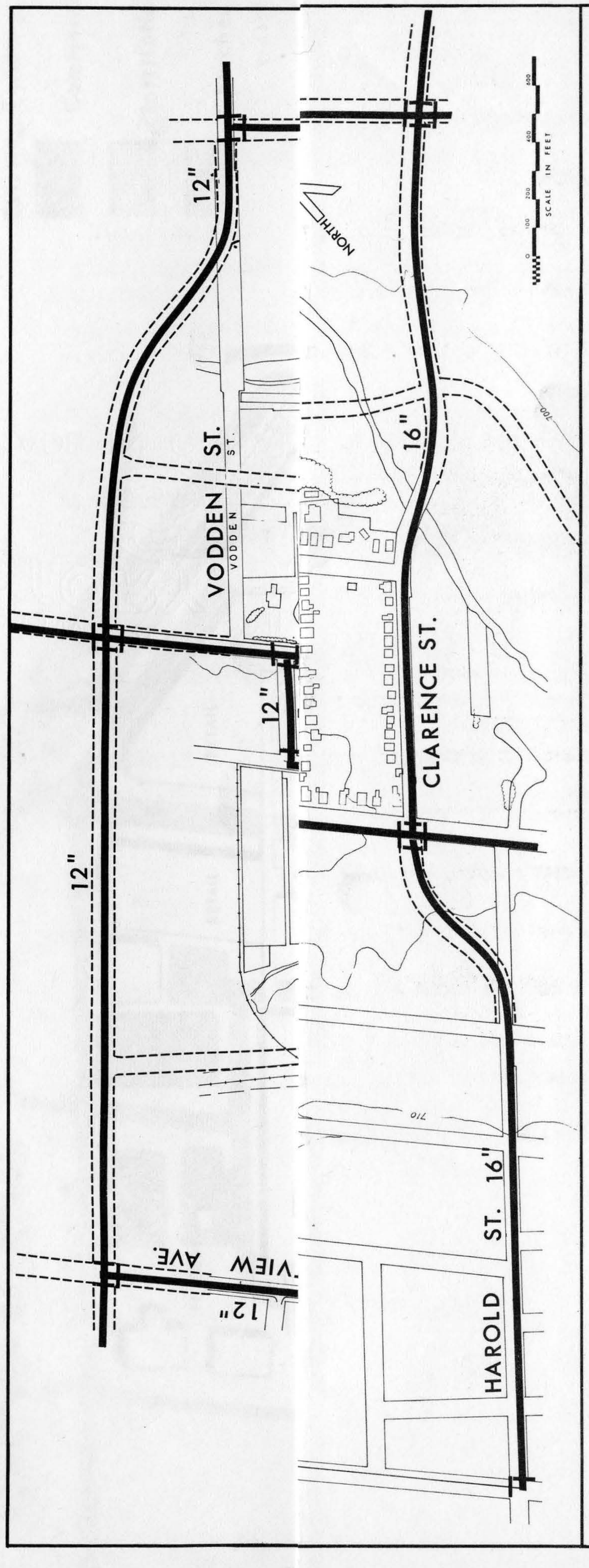
4. Physical Design Concept

A physical design concept is presented on Plate 8 to illustrate how problems of internal circulation in the commercial core can be met, and how some amenity can be introduced into the future Downtown scene.

Parking is expected to be in 4-5 storey garages, all deriving their access from local streets, or from points on arterial streets well removed from the main instersection. All buildings are serviced by an off-street system of service lanes.

By setting back new buildings as old structures are replaced, open spaces can be introduced at focal points where landscaping, street furniture, mosaic paving etc. can be provided for comfort and interest. Space can be set aside for pools, or an artificial ice surface, or for displays and events on important festivals and holidays in order to add life and gaiety to the environment. Bus bays can be provided at these key locations.

A continuous skywalk is proposed at mezzanine level to inter-connect the four quadrants above the traffic, and to afford access to upper levels



WATER DISTRIBUTION REQUIREMENTS

10" EXISTING ARTERIAL MAINS

12" PROPOSED ARTERIAL MAINS

PLAN FOR DOWNTOWN BRAMPTON

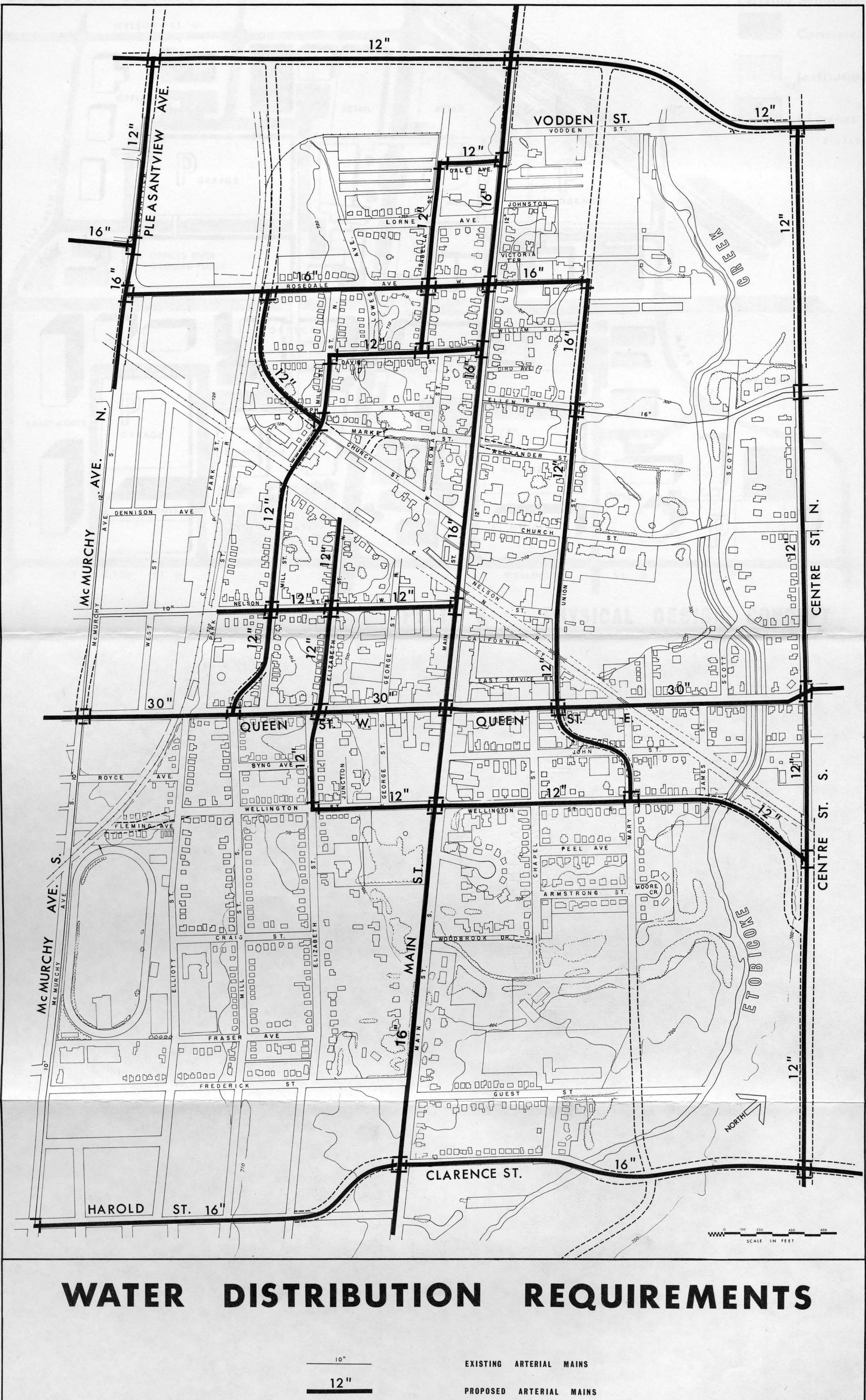
M. M. Dillon & Co. Ltd.

Proctor, Redfern, Bousfield & Bacon
W.O. Chisholm & Associates Ltd.

E. A. Mitchell Ltd.

PLATE No. 7

A-65574-7



WATER DISTRIBUTION REQUIREMENTS

10" EXISTING ARTERIAL MAINS

12" PROPOSED ARTERIAL MAINS

A-65574-7

PLAN FOR DOWNTOWN BRAMPTON

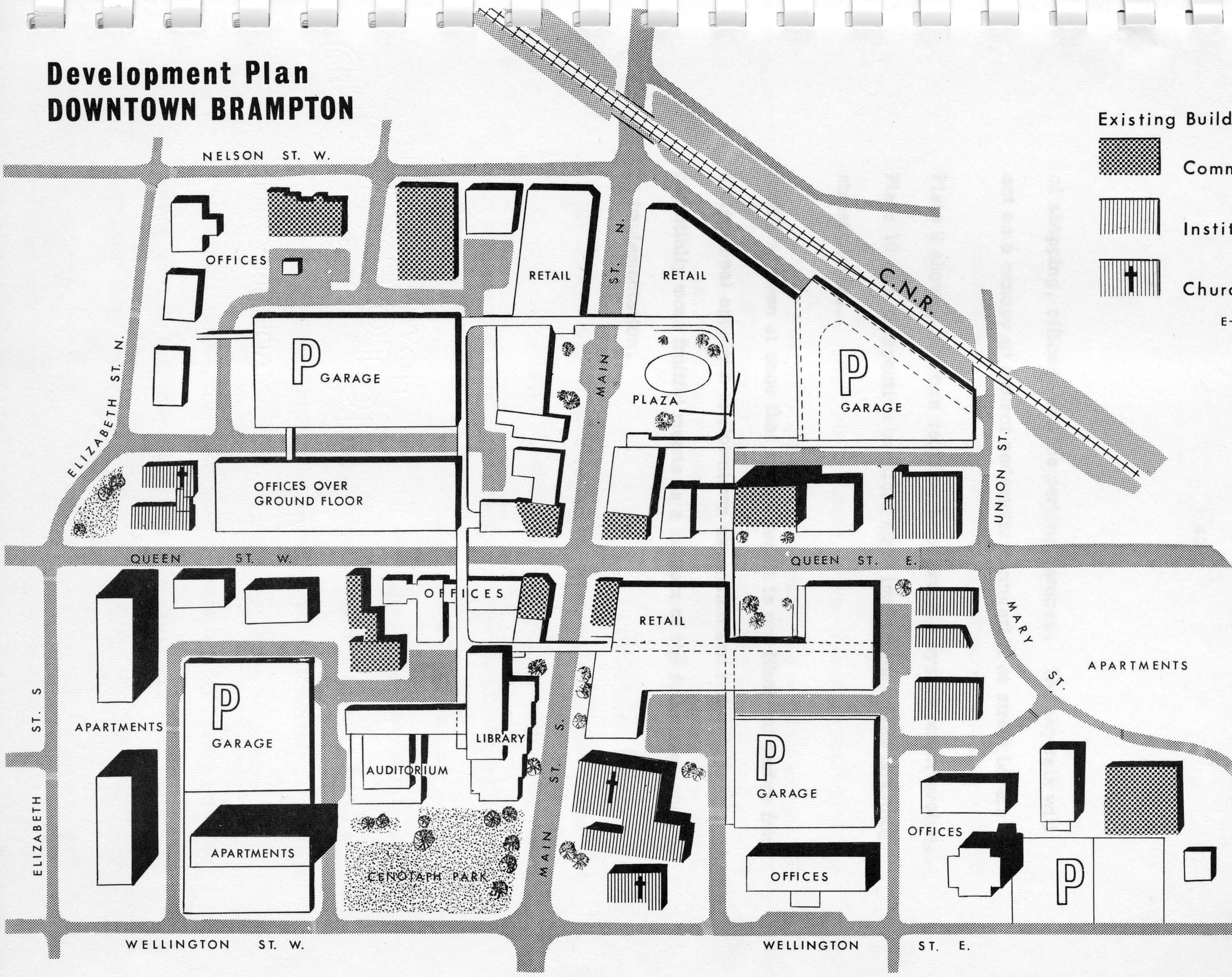
PLATE No.
7

M. M. Dillon & Co. Ltd.

Proctor, Redfern, Bousfield & Bacon
W. O. Chisholm & Associates Ltd.

E. A. Mitchell Ltd.

Development Plan
DOWNTOWN BRAMPTON



Existing Buildings

▨ Commercial

▥ Institutional

✝ Churches

E-65574-5

PLATE 8 PHYSICAL DESIGN CONCEPT

of shopping, offices, and the parking garages. The skywalk will act as a canopy to protect pedestrian circulation at street level.

Plate 9 shows, in cross section, how such a system might evolve. Plate 10 is a perspective to afford some impression of the possible street picture.

It will be seen at once that such a result is not likely to derive from a piecemeal approach to Downtown expansion and redevelopment. A potentially more fruitful means is a subject of the following chapter on implementation.

IV. IMPLEMENTATION

The Plan will be implemented by innumerable public and private decisions over some 20 years if the basic assumptions contained herein prove reasonably valid. The actions of the private sector cannot be devined in advance, and those of the public agencies can only be foreseen as probabilities over the short term. What follows then is a series of recommendations, in general language, pertaining to the most obvious initial steps by public bodies.

1. The Official Plan

The salient features of this plan should be adopted as a part of the public policy statement on future development which is the Official Plan, by formal amendment to that document. Those features are:

- the broad land use pattern.
- the road proposals.
- the sequence of development, and
- a statement of the conditions under which high density rezonings will be permitted.

The latter should include an area requirement (e.g. whole blocks or substantial parts of blocks) and standards for landscaped open space. It will be important to provide for future mixed uses in buildings under

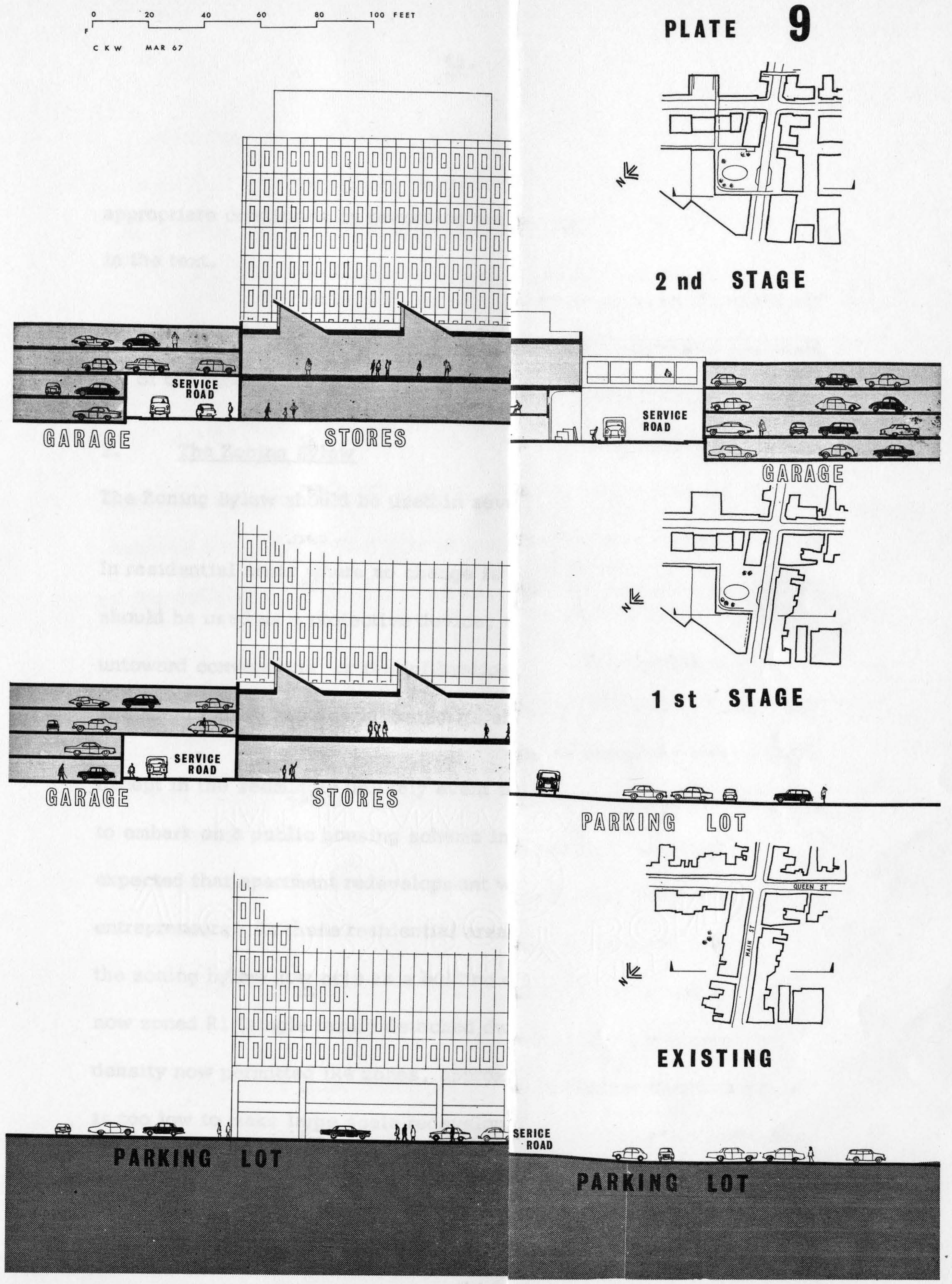
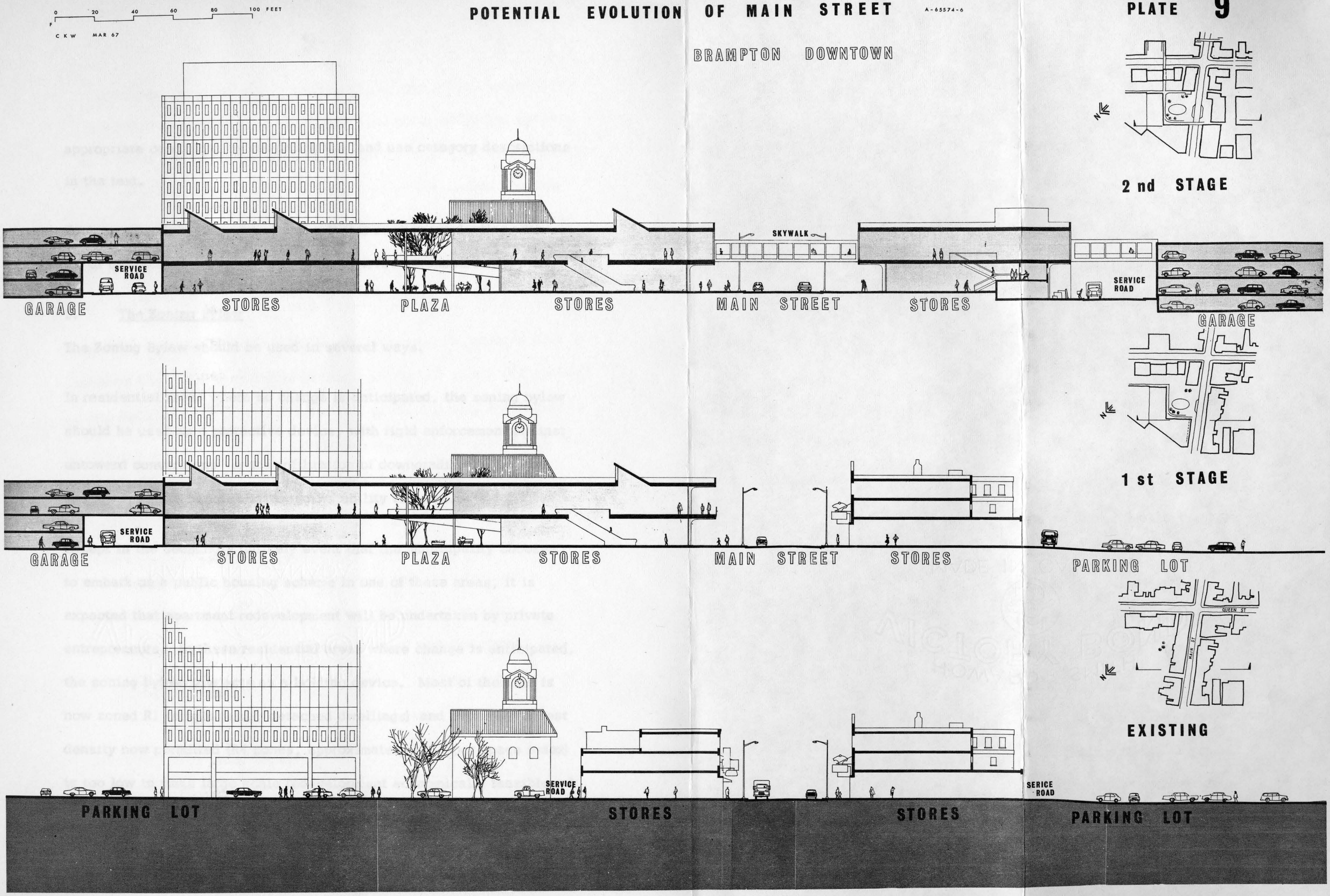


PLATE 9

POTENTIAL EVOLUTION OF MAIN STREET

PLATE 9

BRAMPTON DOWNTOWN



appropriate conditions by rewording the land use category descriptions in the text.

Such an amendment may be part of a larger amendment dealing with all of the recommendations of the Brampton Area Transportation Study.

2. The Zoning Bylaw

The Zoning Bylaw should be used in several ways.

In residential areas where no change is anticipated, the zoning bylaw should be used as a protective device, with rigid enforcement against untoward conversions or the infiltration of downgrading influences. The municipality has demonstrated its ability to do so.

Except in the seemingly unlikely event that the municipality chooses to embark on a public housing scheme in one of these areas, it is expected that apartment redevelopment will be undertaken by private entrepreneurs. In these residential areas where change is anticipated, the zoning bylaw now acts as a holding device. Most of the land is now zoned R1 (single family detached dwellings) and even the highest density now permitted (R4 zones, approximately 1.0 floor space index) is too low to make large scale redevelopment economically feasible. A floor space index of up to 3.0 will likely be required.

A wholly new zoning category is required, with set back, parking, coverage and other regulations appropriate to the very high buildings which will result. Such a new category should not be applied at once, of course. Rather, the bylaw should be amended on a project by project basis, in order that the municipality may obtain from the applicant, as conditions of approval, such necessities as site plan agreements, road widenings and levies for trunk utilities, parts etc.

In the meantime, the municipality can let its requirements for rezonings be known in policy statements released from time to time, and amended as conditions warrant. These requirements can be quite detailed and may include all or most of the following:

- area requirements having reference to whole or part blocks.
- circumstances in which streets may be closed to facilitate land assemblies.
- detailed standards re coverage, set backs, landscaped open space, parking, suite sizes, bedroom count (if school accommodation becomes a problem) the amounts of various levies, etc.

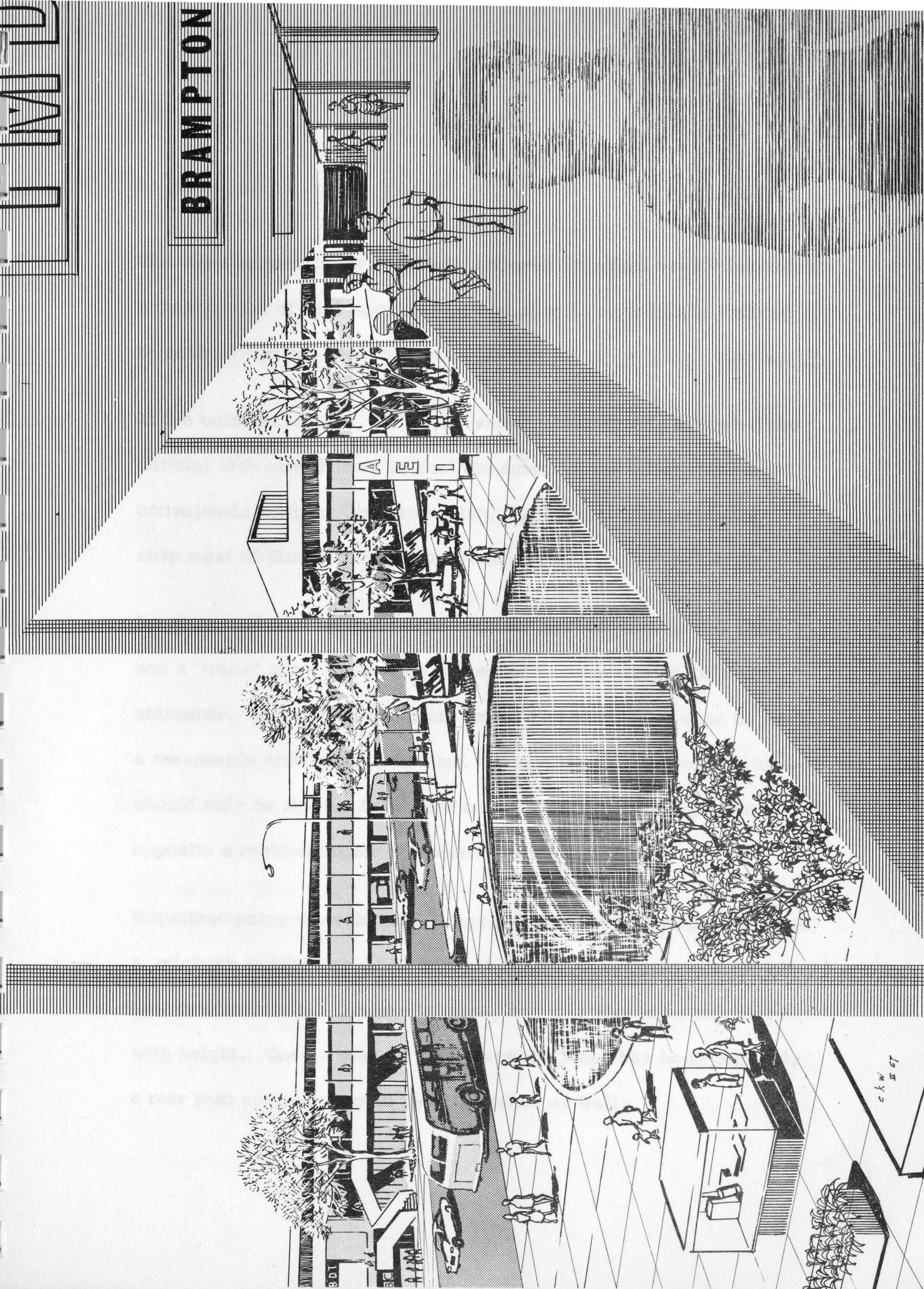


PLATE 10

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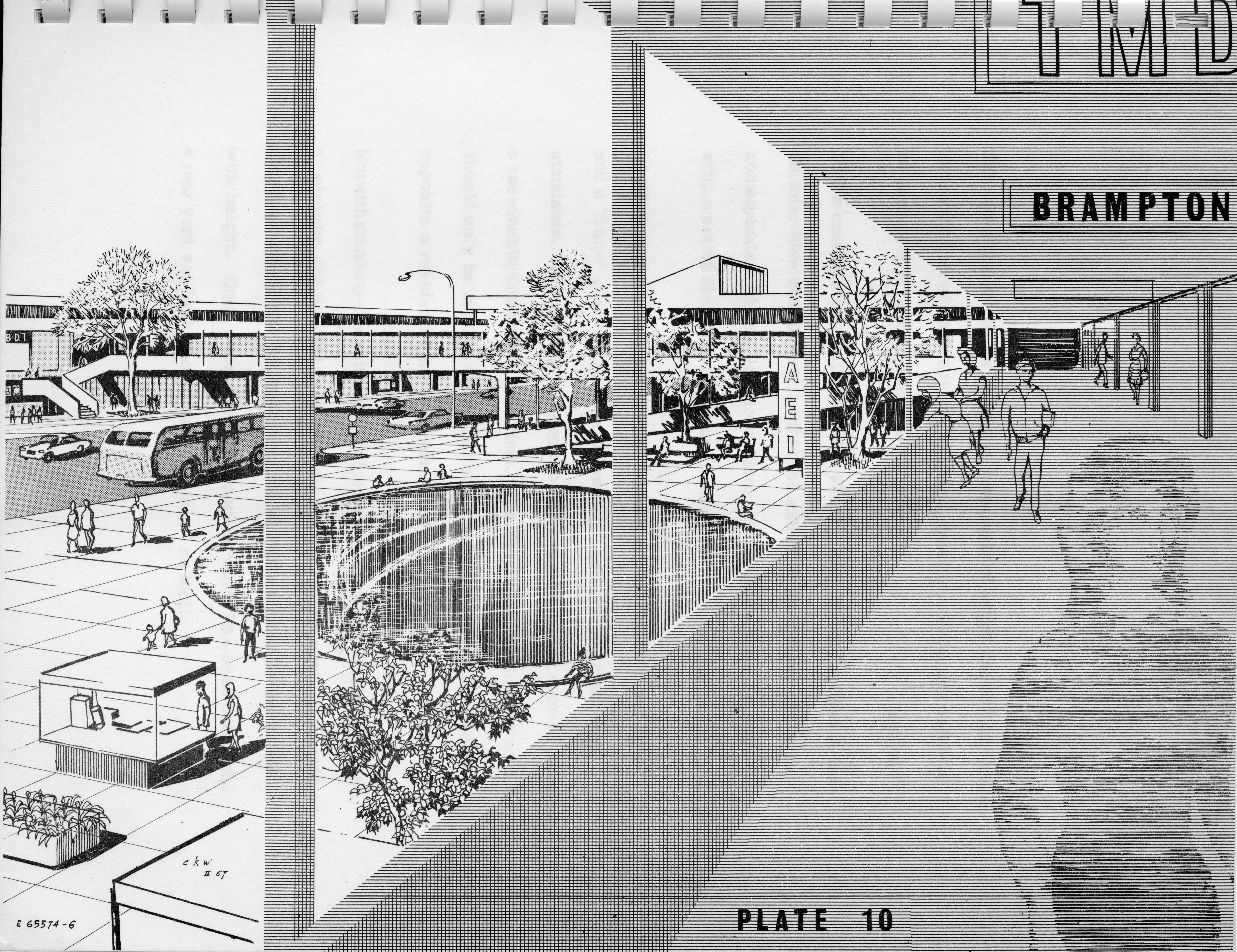


BRAMPTON

PLATE 10

The same holds true for buildings proposed for mixed uses. Individual consideration of each application, and special amendments tailored to each project are recommended.

In the commercial area, the bylaw should be amended, following the Official Plan amendment, so that the extent of the commercial area corresponds with the Downtown Plan. Of special concern is the strip west of Elizabeth Street on Queen Street.

No attempt should be made to provide for a 'core' commercial zone and a 'frame' commercial zone by separate categories or different standards. The natural economic forces can be counted upon to produce a reasonable distinction over time. Special differentiations as to use should only be applied in special cases such as where appearance opposite a residential zone is particularly important.

Notwithstanding the substantial objections which will doubtless arise, a minimum ten foot set back from all streets is recommended for all new buildings in the commercial area, and this should be increased with height. Once a plan for future service lanes has been detailed, a rear yard set back should be established as well.

At the moment, a floor space limitation does not appear to be required, and it is recommended that further trends be observed before a decision is attempted in this matter.

3. Site Plan Agreements

It is recommended that any development application in the Downtown should result in a site plan agreement whereby the municipality is afforded an opportunity to review design aspects which cannot legally or practically be written into a zoning bylaw.

4. Urban Renewal Legislation

From the investigations conducted during this Study, it is believed that a prima facie case can be made for the staged redevelopment of the commercial core, under pertinent provincial and federal urban renewal legislation.

The problem appears to be primarily one of structural condition and not functional obsolescence except as it applies to the upper floors of certain of the older commercial buildings. To date, private redevelopment has been slow, and if experience in other municipalities is any guide, an urban renewal scheme may be the motivating force required.

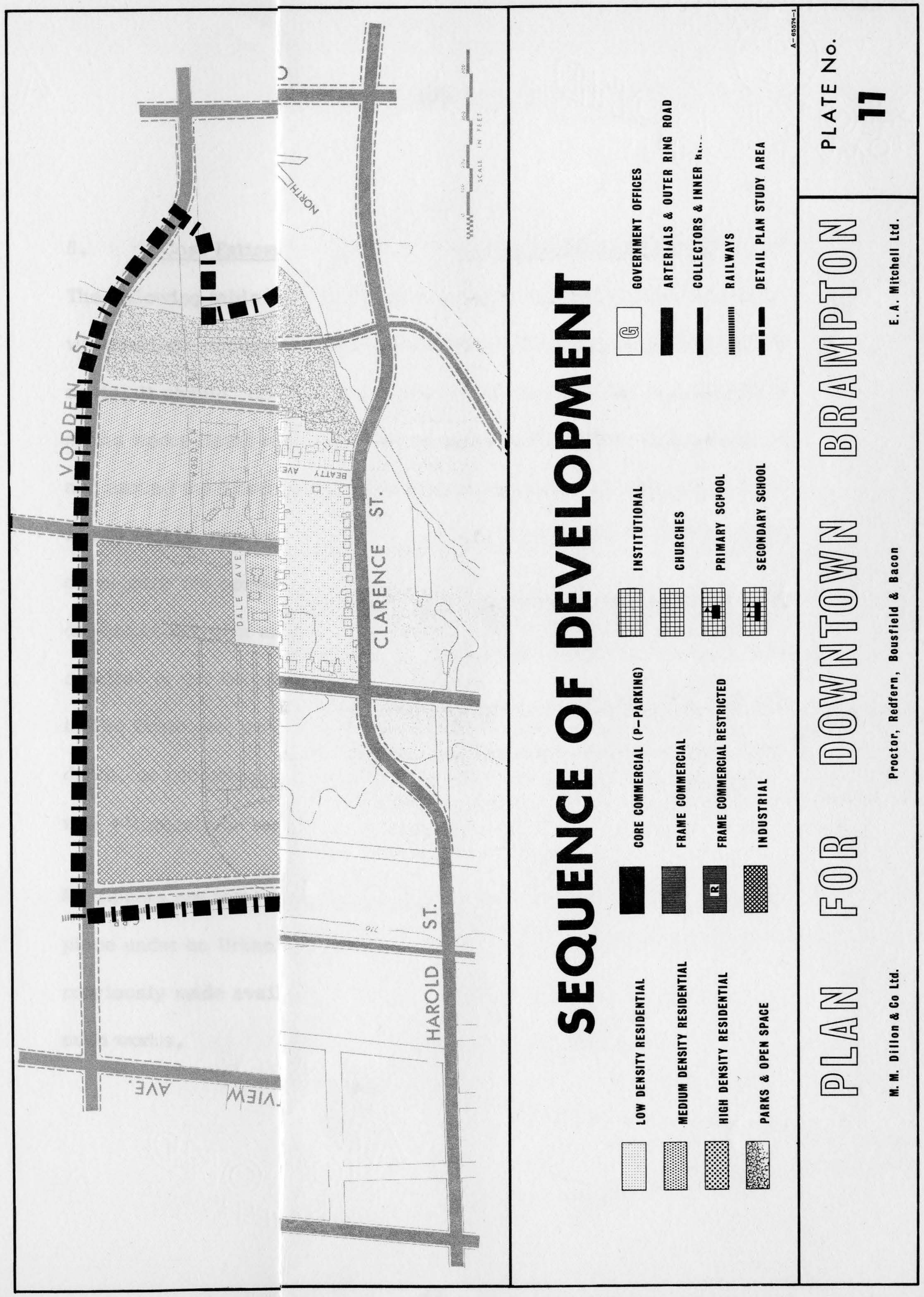
It is evident that desirable results are unlikely to be achieved by piecemeal redevelopment, and yet this is precisely the form in which it will occur if initiative is left solely to the private sector. Only when public powers to assemble land and assist in financing are brought to bear can a comprehensive program be planned and implemented and Central Mortgage and Housing Corporation regarding the possibility of an urban renewal scheme prepared under Section 21 of the Ontario Planning Act and 23A of The National Housing Act. Under that and other legislation, various degrees of financial assistance for the studies and for subsequent implementation (including write down costs on land, clearance, business disruption and relocation, servicing costs and project administration) may be forthcoming from the senior levels of government.

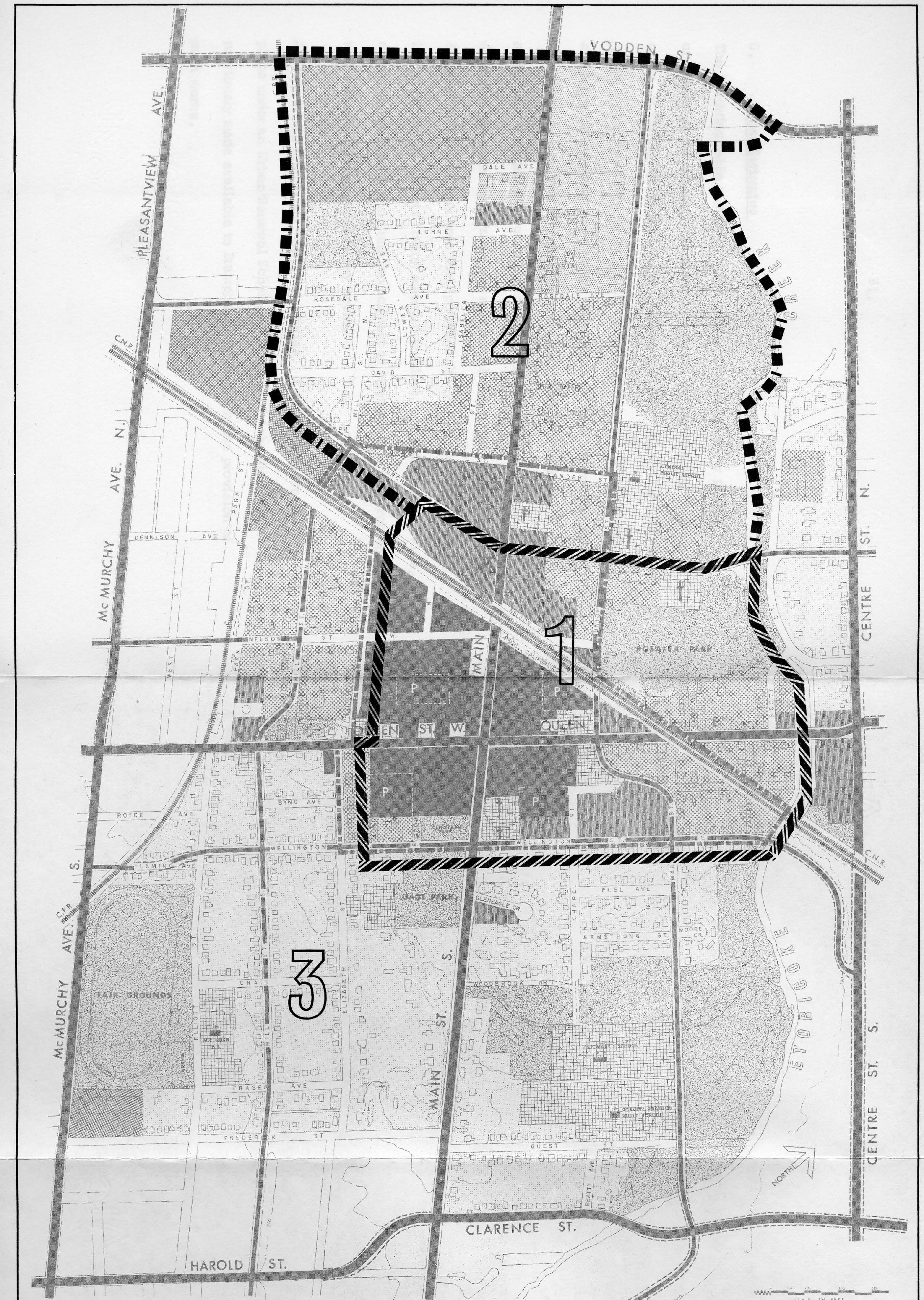
Municipal officials should be prepared for a suggestion that an urban renewal study covering the whole Town should be undertaken first, in order that all concerned can be satisfied that the Downtown is indeed the first priority renewal area in the community.

5. Sequence of Development

Plate 10 shows the basic sequence of development and redevelopment which is recommended. This sequence is based on the logical order of providing relief storm sewers, without which further growth is not possible. This order will be clear by reference back to Plate 6. Within these broad stages, substages may be established on the basis of other factors, chiefly economic.

The first stage includes the commercial core and the apartment redevelopment on Queen Street East. It can follow from the changes resulting from the Queen Street East grade separation, the Mary-Union Street connection and attendant improvements to utilities.





SEQUENCE OF DEVELOPMENT

░	LOW DENSITY RESIDENTIAL	■	CORE COMMERCIAL (P–PARKING)	▦	INSTITUTIONAL	G	GOVERNMENT OFFICES
░	MEDIUM DENSITY RESIDENTIAL	■	FRAME COMMERCIAL	▦	CHURCHES	━	ARTERIALS & OUTER RING ROAD
▒	HIGH DENSITY RESIDENTIAL	R	FRAME COMMERCIAL RESTRICTED	▦	PRIMARY SCHOOL	━	COLLECTORS & INNER
▒	PARKS & OPEN SPACE	▩	INDUSTRIAL	▦	SECONDARY SCHOOL	┅	RAILWAYS
						━ ━	DETAIL PLAN STUDY AREA

A–65574–1

PLAN FOR DOWNTOWN BRAMPTON

M. M. Dillon & Co Ltd. Proctor, Redfern, Bousfield & Bacon E. A. Mitchell Ltd.

PLATE No.
11

6. Cost Estimates

The following table summarizes the cost estimates for major public undertakings required by this plan, by stages. In considering these costs, it should, of course, be recognized that many, indeed the majority of the works listed will be required irrespective of any redevelopment in and around the Downtown as herein proposed. Most of the road improvements will be required to meet the general build-up of traffic which will accompany the continued growth of the community and the increase in distances between employment and residential areas, all as have been detailed in the Brampton Area Transportation Study. Many utilities, being in The Downtown streets, being among the oldest, are inadequate in size, depth, or condition, and their replacement to alleviate existing problems will ultimately be required in any event.

All figures are total costs, before subsidies. If redevelopment takes place under an Urban Renewal Scheme, a new set of subsidies, not previously made available to Brampton, will assist in the provision of such works.

7. Review

Although this purports to be a twenty year plan for the Downtoan, the need for continuing comprehensive review cannot be emphasized too strongly.

COST ESTIMATES BY STAGES

Stage 1

(a) Roads (1 Property, 2 Structure, 3 Roadway)

Main Street South Clarence Street to Queen Street	$ 140,000	(3)
Queen Street East Main Street to Centre Street	1,095,000	(2,3)
McMurchy Avenue South Harold Street to Queen Street	446,000	(1,3)
Harold Street McMurchy Avenue to Main Street	291,000	(1,3)
Centre Street Clarence Street to Queen Street	1,233,000	(1,2,3)
Mary Street Clarence Street to Queen Street	704,000	(1,3)
Wellington Street East Main Street to Centre Street	251,000	(1,3)
Church Street East Main Street to Centre Street	90,000	(1,3)
Sub-total	$4,250,000	

COST ESTIMATES BY STAGES (cont'd)

Stage 1

(b) **Sanitary Sewers**

Church Street Union Street to Thomas Street	$ 25,000
Queen Street East Scott Street to Main Street	50,000
Queen Street West Main Street to George Street	8,000
Main Street South California Street to Wellington Street	25,000
	$ 108,000

(c) **Storm Sewers**

Main's Creek Trunk Extension California St. to Thomas Street	$180,000
Queen Street George Street to Etobicoke Creek	115,000
Chapel Street John St. to Wellington St.	12,000
Wellington Street Main Street to Etobicoke Creek	57,000
Nelson Street	16,000
Church St. - west of Thomas St. and east of Main St.	66,000
Sub-Total	446,000

(d) **Watermins**

Queen Street E.	Main St. to Centre St.	$144,000
Main St.	Church St. to Clarence St.	160,000
Union St.	Wellington St. to Ellen St.	31,000
Nelson St.	C.P.R. to Main St.	45,000
Wellington St.	Elizabeth St. to Centre St.	90,000
		$ 470,000
	TOTAL STAGE 1	$5,274,000

COST ESTIMATES BY STAGES (cont'd)

Stage 2

(a) Roads

Main Street North Queen Street to Vodden Street	$ 322,000	(1,3)
Queen Street West McMurchy Avenue to Main Street	137,000	(1,3)
McMurchy Avenue North Queen Street to C.N.R. Tracks	135,000	(1,3)
C.N.R. Tracks to Vodden Street	1,204,000	(1,2,3)
Clarence Street East Main Street to Sterne Avenue, Centre St.	277,000	(1,3)
Centre Street North Queen Street to Church Street	160,000	(1,3)
Church Street to Vodden Street	310,000	(1,3)
Vodden Street West and East McMurchy Avenue to Main Street	373,000	(1,3)
Main Street to Centre Street	308,000	(2,3)
Mill Street North Queen Street to Vodden Street	1,064,000	(1,2,3)
Chapel Street - Union Street Queen Street to Main Street	1,287,000	(1,2,3)
Fleming Avenue McMurchy Avenue to Main Street	168,000	(1,3)
Nelson Street McMurchy Avenue to Main Street	186,000	(1,3)
Church Street West Mill Street to Main Street	56,000	(1,3)
Rosedale Avenue Moore Street to Main Street	325,000	(1,3)
Sub-total	$6,312,000	

COST ESTIMATES BY STAGES (cont'd)

Stage 2

(b) Storm Sewers

Main Street North Church Street to Johnston Street	100,000

(c) Watermains

Queen St. W.	Main St. to McMurchy Ave.	138,000
Main St. N.	Church St. to Vodden St.	116,000
Market St.		16,000
Union St.	Rosedale Ave. to Ellen St.	45,000
Dale Ave.		8,000
Isabella St.		24,000
David St.		19,000
Rosedale Ave.	Union St. to C.P.R.	70,000
Church St.	Mill St. to Rosedale St.	22,000
		$458,000

TOTAL STAGE II $6,870,000

Stage 3

(a) Roads

Mill Street South Harold Street to Queen Street	$161,000	(1,3)

(b) Sanitary Sewers

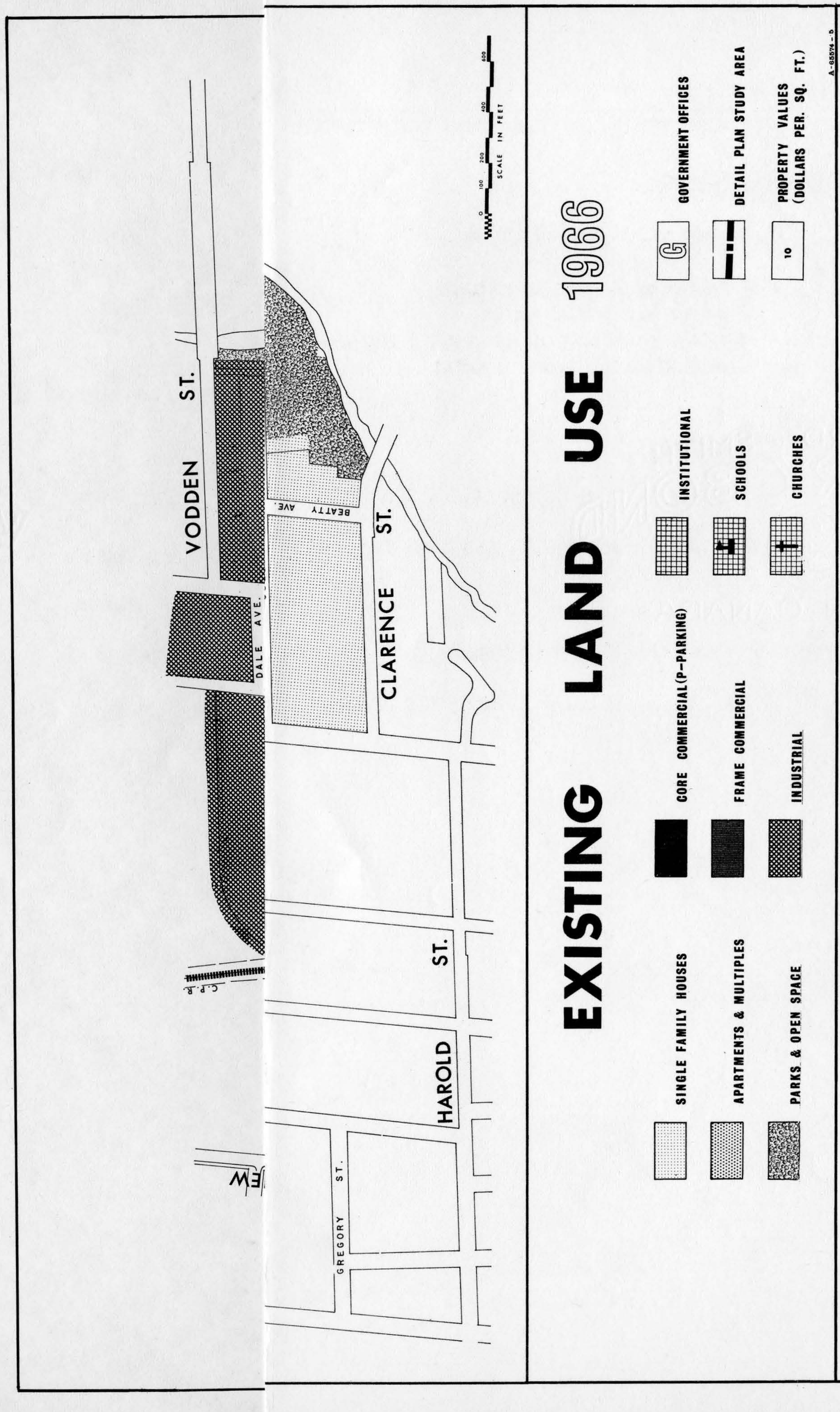
Elizabeth Street, Wellington Street and Mill Street	90,000

(c) Storm Sewers

Elizabeth St. - Mill St. System	772,000
Main's Creek Trunk Extension Thomas St. to Vodden St. (constructed as part of stage 3 although located in the stage 2 area)	175,000
	$947,000

(d) Watermains

Elizabeth St. Wellington St. to C.N.R.	45,000
Mill St. N. Queen St. to David St.	65,000
	$110,000
TOTAL STAGE III	$ 1,308,000
GRAND TOTAL, ALL STAGES	$13,452,000

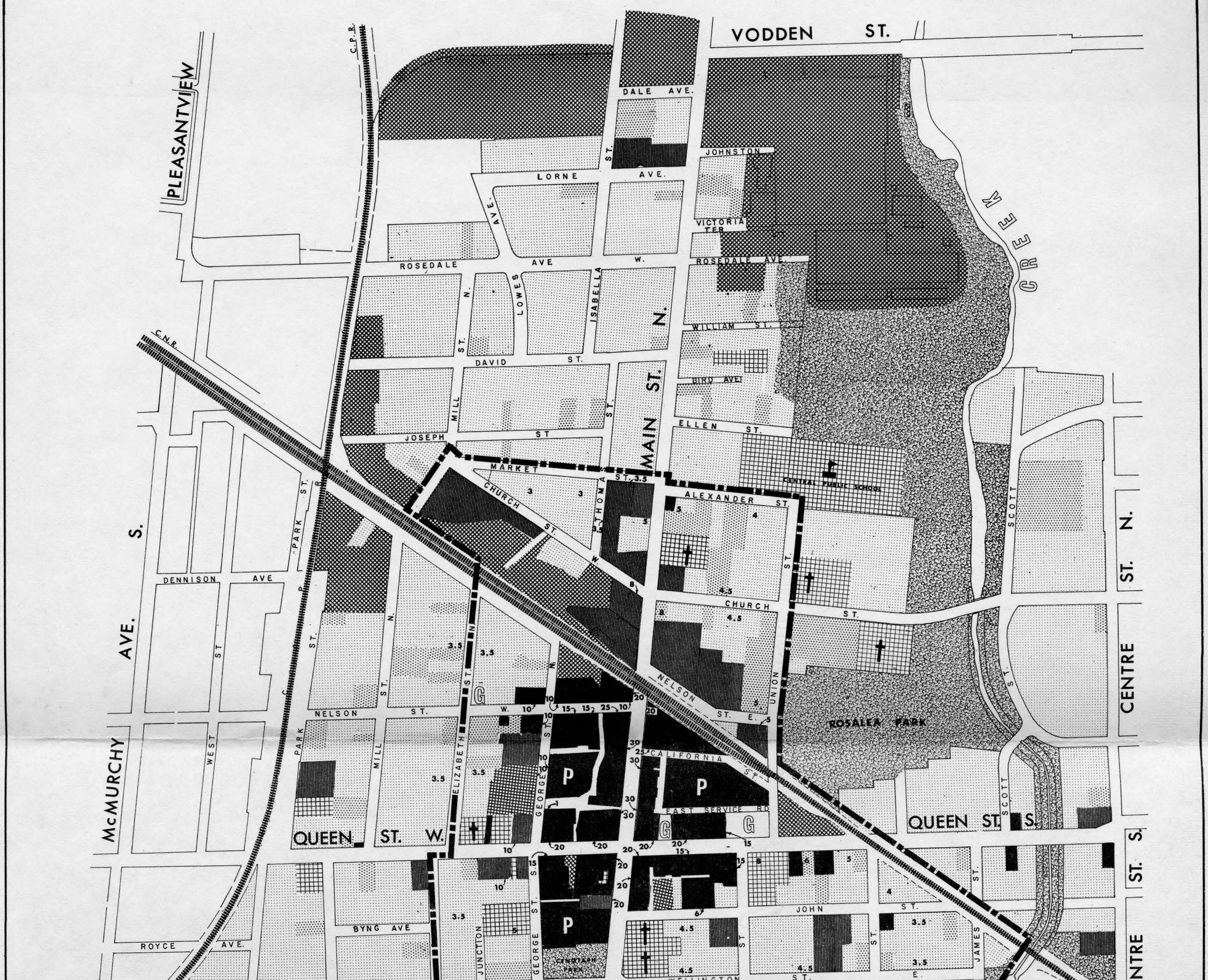


EXISTING LAND USE 1966

PLAN FOR DOWNTOWN BRAMPTON

PLATE No
A-1

M.M. Dillon & Co. Ltd.
Proctor, Redfern, Bousfield & Bacon
E.A. Mitchell Ltd.



EXISTING LAND USE 1966

░ SINGLE FAMILY HOUSES

▒ APARTMENTS & MULTIPLES

▓ PARKS & OPEN SPACE

■ CORE COMMERCIAL (P—PARKING)

■ FRAME COMMERCIAL

▨ INDUSTRIAL

▦ INSTITUTIONAL

▦ SCHOOLS

▦ CHURCHES

G GOVERNMENT OFFICES

— · — DETAIL PLAN STUDY AREA

10 PROPERTY VALUES (DOLLARS PER. SQ. FT.)

A-65574 - D

PLAN FOR DOWNTOWN BRAMPTON

PLATE No
A-1

M.M. Dillon & Co. Ltd.   Proctor, Redfern, Bousfield & Bacon   E.A. Mitchell Ltd.

APPENDICES

APPENDIX 'A'

SURVEY AND ANALYSIS

The Plan for Downtown Brampton was based on the following surveys and analyses.

1. Existing Land Use - General

Plate A-1 shows existing land uses in the Study Area. Dealing first in general terms, the following features stand out:

a. The Core(1) Commercial Area

The Core Commercial area is exceedingly compact, and this is regarded as distinctly advantageous for the future. The C.N.R. right-of-way, the short hill parallelling Elizabeth Street, and the parks and institutional uses on Main Street South have combined to compress the core uses into a tight 17 acres, extending no more than about 600 feet in any direction from the focal intersection of Main and Queen Streets. The basic off-street parking system has been well founded, with large lots already located in three of the four quadrants.

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(1) 'Core Commercial' is a term used throughout this Report to designate that group of commercial uses found at the very centre of the Downtown. In Brampton, this group includes retail stores (which normally provide the 'image' of the Downtown) personal and professional services, business offices, banks and financial offices, restaurants, commercial entertainment, and related off-street parking.

The area is characterized by high daytime, and relatively high evening activity, with consequent highest per foot land values. Ownerships tend to be small, and connections between uses are pedestrian rather than vehicular. The strength derives from the group, rather than individual uses. Off-street parking is frequently by a public agency.

b. The Frame [3] Commercial Area

The Frame Commercial Area in the Brampton Downtown is relatively small. Normally 2 1/2 - 3 times the extent, and completely surrounding the core, the frame uses are concentrated only for a short distance along Main Street North near Church Street. Elsewhere, they are scattered. Zoning, and other factors have combined to discourage ribbon

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(3) 'Frame Commercial' is a term used throughout this report to designate that group of commercial uses which is adjacent to and surrounds, or partially surrounds, the 'core'. In Brampton, this grouping embraces a wide range, including automobile, boat and machinery sales service and repair, building trades and services, furniture and appliance warehouses, cold storage plants, dry cleaning and laundry plants, dairies and bakeries, custom workshops, printing, undertaking, and veterinary establishments, retail building supplies etc. Institutional uses and government offices are major sub-groupings in the Frame.

Evening activity is light except in special cases, and land values tend to be lower per square foot than in the "Core". These uses are oriented to vehicular rather than pedestrian customers. They seldom relate to one another, and each usually relies on its own drawing power. Ownerships are larger, and off-street parking is usually provided individually, and privately.

extension on the four main access roads leading to the core. New frame uses have sought arterial road frontage at more peripheral locations.

A conspicuous absentee is any kind of hotel or motor hotel at a Downtown location.

c. Residential Areas

The residential areas surrounding the Downtown are characterized by remarkably light densities. Although there have been some conversions of larger, older dwellings to flats and duplexes, only three apartment buildings are located in the Study Area, and the predominant pattern is still single family houses almost flush against the commercial centre. Obviously, the growth of Brampton has been so rapid that the Downtown fringe has not had time to make the transition to higher density uses. Zoning policies and water shortages have undoubtedly retarded the process as well.

d. Open Space

The Etobicoke Creek Valley, Gage and Cenotaph Parks, and the Fairgrounds afford a most fortuitous amount and distribution of larger open spaces for Brampton's Downtown. A substantial vacant parcel remains in the north west corner of the Study Area, which is the one quadrant not blessed with public open space to date. This is of immense potential benefit for any increase in population density, as well as for the Town as a whole.

The chief deficiency under this heading is in the small, intimate open spaces in the commercial core itself, spaces which relieve the masonry and paving and afford comfort and attraction for pedestrian shoppers and downtown workers.

e. Industrial Uses

Industrial uses are peripheral to the Study Area, except for a number of older establishments (one vacant) and some storage uses along the railways.

f. The Railroads

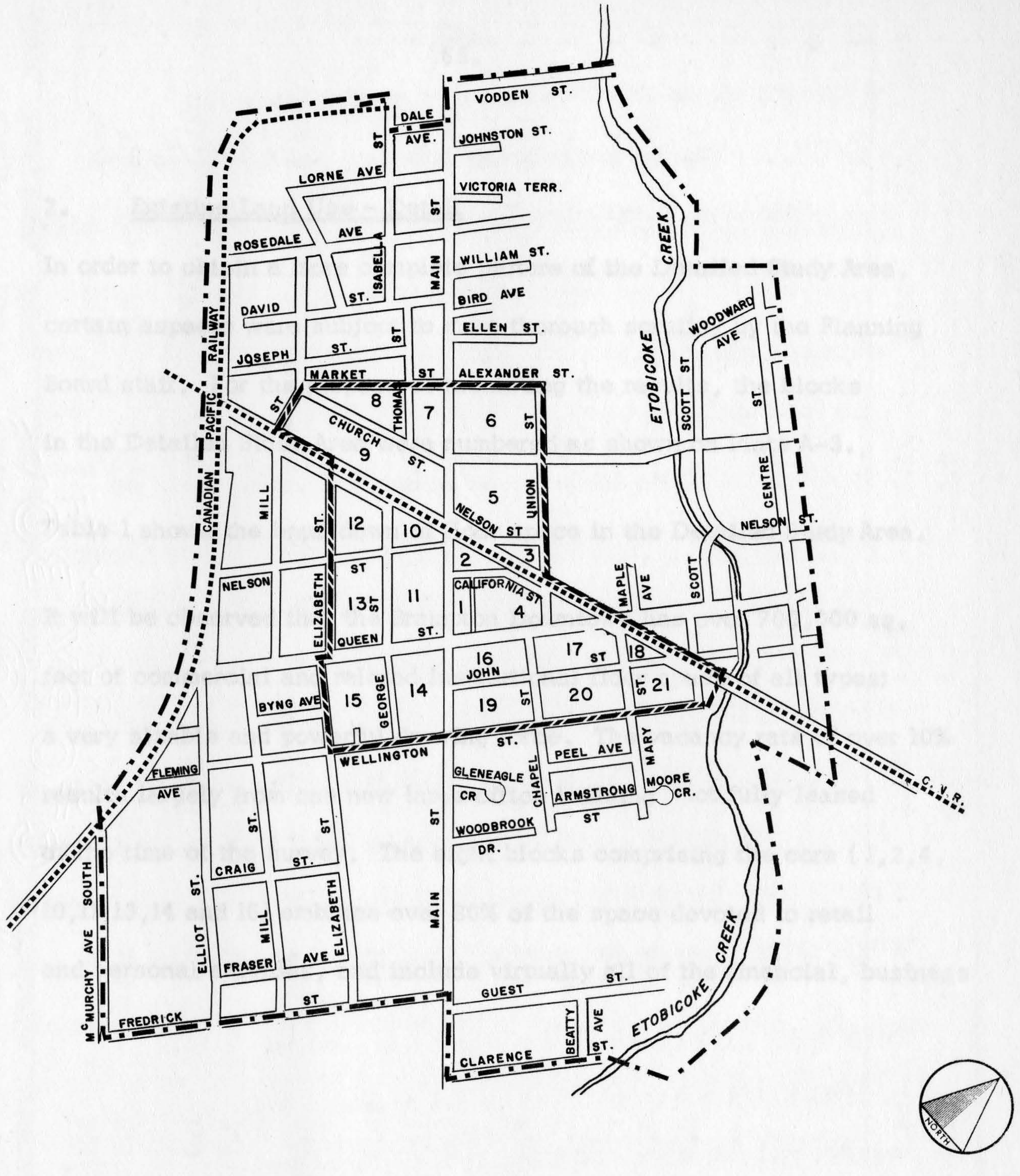
The Canadian Pacific is only lightly used, and has not exerted a major impact on the Study Area. Owing to its circuitous route to Toronto, only the location of a major rail use north of Brampton is likely to increase C.P.R. traffic through the Brampton Downtown.

The Canadian National, on the other hand, is a dominant feature. Except for a short section about one mile in length between the Downtown and Kennedy Road, the line is double tracked through Brampton. Notwithstanding some operational disadvantages, it does not appear likely that the short section remaining will be double tracked unless a rail commuter service through Brampton is initiated. As the major western access to the Vaughan sorting yards, this track is now heavily used. Its presence not only complicates access to the central core from the north and east, but its elevated right-of-way over considerable length is detrimental to the Downtown as a place to work and live. As the frequency and length of trains inevitably increases, the noise generated will become more obnoxious.

Preliminary discussion were held with representatives of the C.N.R. regarding the future of this track and the possibility of its relocation, by-passing Brampton on the south where reasonable grades may be maintained.

However feasibile such a scheme might be from a technical standpoint, it does not at all appear to be likely in economic terms. The fact is that there are really no important advantages for the C.N.R. For future rail commuter service, the new route may well be substantially less attractive than the existing route. Although no comparisons have been worked out, relocation costs would undoubtedly be substantially higher than the costs of the short length of double tracking on the existing alignment, and there is no practical way of distributing the cost differential over the beneficiaries. There is also the distinct possibility of strenuous objection from owners whose lands might be adversely affected by any new alignment.

Accordingly, it must be acknowledged that increased traffic requirements are most likely to be met by double tracking on the existing right-of-way, widened. It is expected that a 150 ft. right-of-way (where practical) would be sought for such a purpose.



LEGEND

GENERAL PLAN STUDY AREA BOUNDARY —·—·—

DETAIL PLAN STUDY AREA BOUNDARY ▬▬▬

PLAN FOR DOWNTOWN BRAMPTON

PLATE A—3

BLOCK REFERENCE NUMBERS

DETAILD STUDY AREA

E-65574-4

2. Existing Land Use - Detail

In order to obtain a more complete picture of the Detailed Study Area, certain aspects were subject to more thorough scrutiny by the Planning Board staff. For the purpose of tabulating the results, the blocks in the Detailed Study Area were numbered as shown on Plate A-3.

Table 1 shows the breakdown of floor space in the Detailed Study Area.

It will be observed that the Brampton Downtown has over 700,000 sq. feet of commercial and related institutional floor space of all types; a very sizable and powerful drawing force. The vacancy rate of over 10% results largely from one new large office building not fully leased at the time of the survey. The eight blocks comprising the core (1,2,4, 10,11,13,14 and 16) embrace over 80% of the space devoted to retail and personal services, and include virtually all of the financial, business

TABLE 1

FLOOR SPACE BREAKDOWN: DETAILED STUDY AREA (sq.ft. x 1000)

Block	Retail & Pers. Serv.	Banks & Finan.	Community & Bus. Serv.	Admin. & Gov't.	Transport & Comm.	Indust. & wholesale	Warehouse, storage	Vacant Comm.	Res.	Total
1	21.6	4.0					3.4		31.3	60.3
2	13.4	4.1	6.6			2.0	0.4	0.3	3.9	30.7
3	6.9									6.9
4	41.1	6.1	2.2	27.3	98.8	14.7	1.3	40.8	7.4	239.7
5	4.1				0.505	6.0	0.2	14.8	6.2	31.8
6	2.2								1.7	3.9
7	4.8						0.800			5.6
8										
9	22.2				7.1	1.0	28.0	7.8		66.1
10	11.5	4.4	2.5		0.3		2.1	0.7		21.4
11	85.7	18.5	31.6		43.4	0.6	8.8	7.21	16.2	212.0
12	5.9	1.3	1.5							8.7
13	15.0				0.5	2.1	7.5		0.8	25.9
14	13.4	11.8	15.3		4.4	7.4	1.6		4.3	58.2
15	11.8		1.8			2.3			1.4	17.3
16	28.5	4.5	8.6	2.5		5.8	0.4	10.1	8.1	68.5
17	6.3	0.3	1.2	12.6		5.8	0.4		0.9	27.5
18										
19			0.6		2.7	0.7			0.6	4.6
20					13.6					13.6
21	0.7									.7
TOTALS	295.1	55.0	71.9	42.4	171.3	48.4	54.9	81.7	82.7	903.4
%	32.7	6.1	8.0	4.7	18.9	5.4	6.1	9.0	9.1	

Source: Planning Board Staff, 1966.

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and community service floor space. The commercial floor space index at between 0.5 and 0.6 is considered to be fractionally above what might have been expected for a Downtown of this size, and obviously reflects the compact nature of the area, as well as the impact of the Queen's Square building.

Residential vacancies in the Study Area were surveyed and mapped, but the numbers were relatively few and no definite pattern was evident.

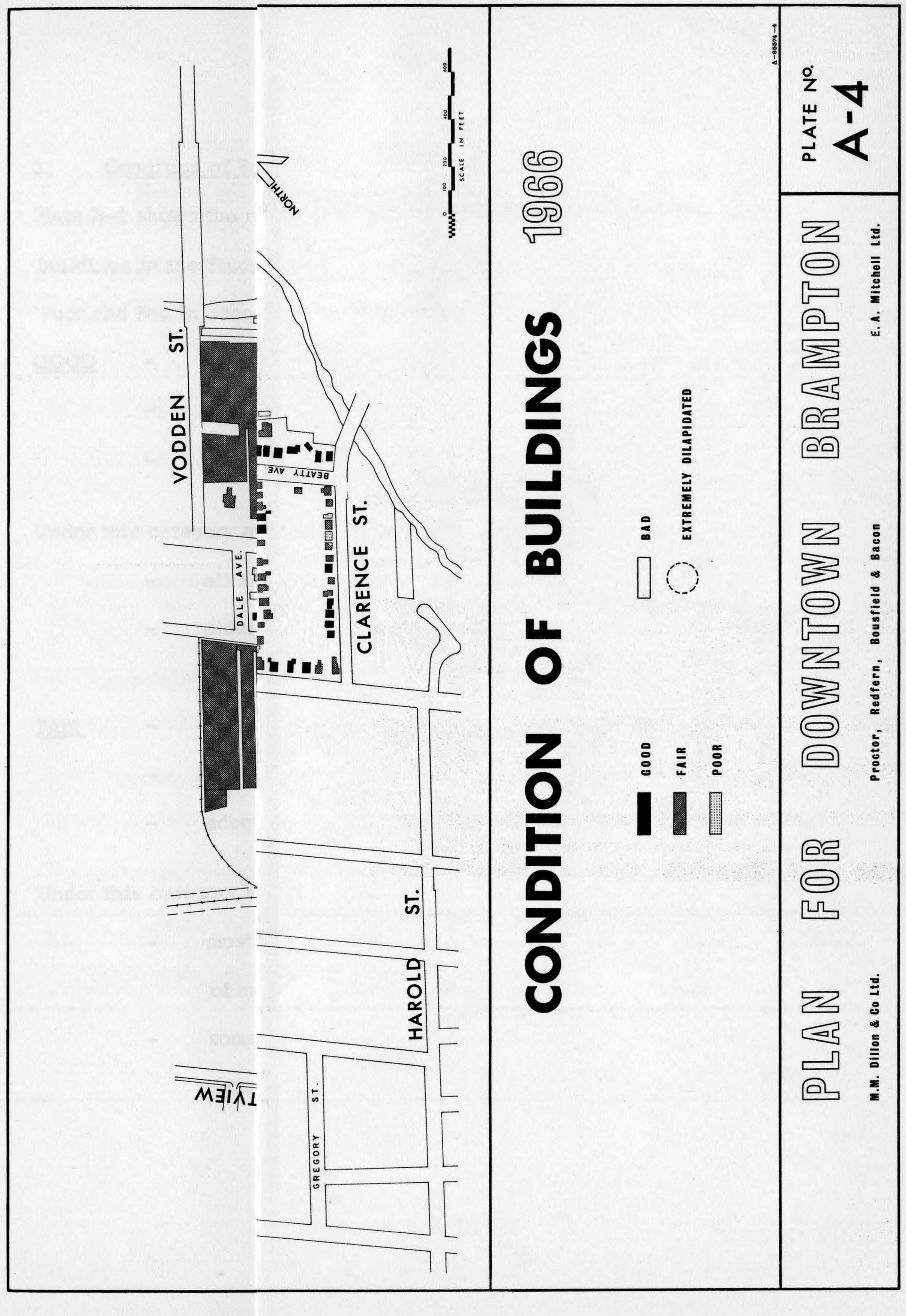
Table II shows the breakdown of employment in the Detailed Study Area.

As might be expected, employment reflects the pattern indicated by the floor space analysis. The traditional 'core' uses (retail, personal service, banking and finance and community services) employ over 60% of all persons, with the traditional 'frame' uses relatively light. The inner eight blocks carry over 75% of the total employment. Employee density for all commercial floor space (including related government and administration) averages about 400 sq. feet/employee which is quite usual.

TABLE II

DETAILED STUDY AREA: BREAKDOWN OF EMPLOYMENT

	Retail & Pers. Serv.	Banks & Finan.	Comm. & Bus. Serv.	Admin. & Gov't.	Transp. & Comm.	Ind. whole.	wareh. storage	Total
Categories	1	2	3	4	5	6	7	
Block 1	69	21						90
2	34	32	23					89
3	8							8
4	27	34	27	100	74	10		272
5	12					13		25
6	7							7
7	11							11
8								
9	29				32	3	43	107
10	33	24	7	2	20		6	92
11	210	82	91		2			385
12	9	3	6					18
13	30		2			75		107
14	43	57	60		51	44		255
15	27		3			6		36
16	41	28	39			12		120
17	3	7	12	45				67
18								
19			2		13	5		20
20					85			85
21	2							2
TOTAL	595	288	272	147	277	168	49	1,796
% of Total	33.1%	16.0%	15.2%	8.2%	15.4%	1.0%	2.7%	91.6
Sq.Ft. per Employee	496	191	264	287	625	-	-	Comm. Av. 403

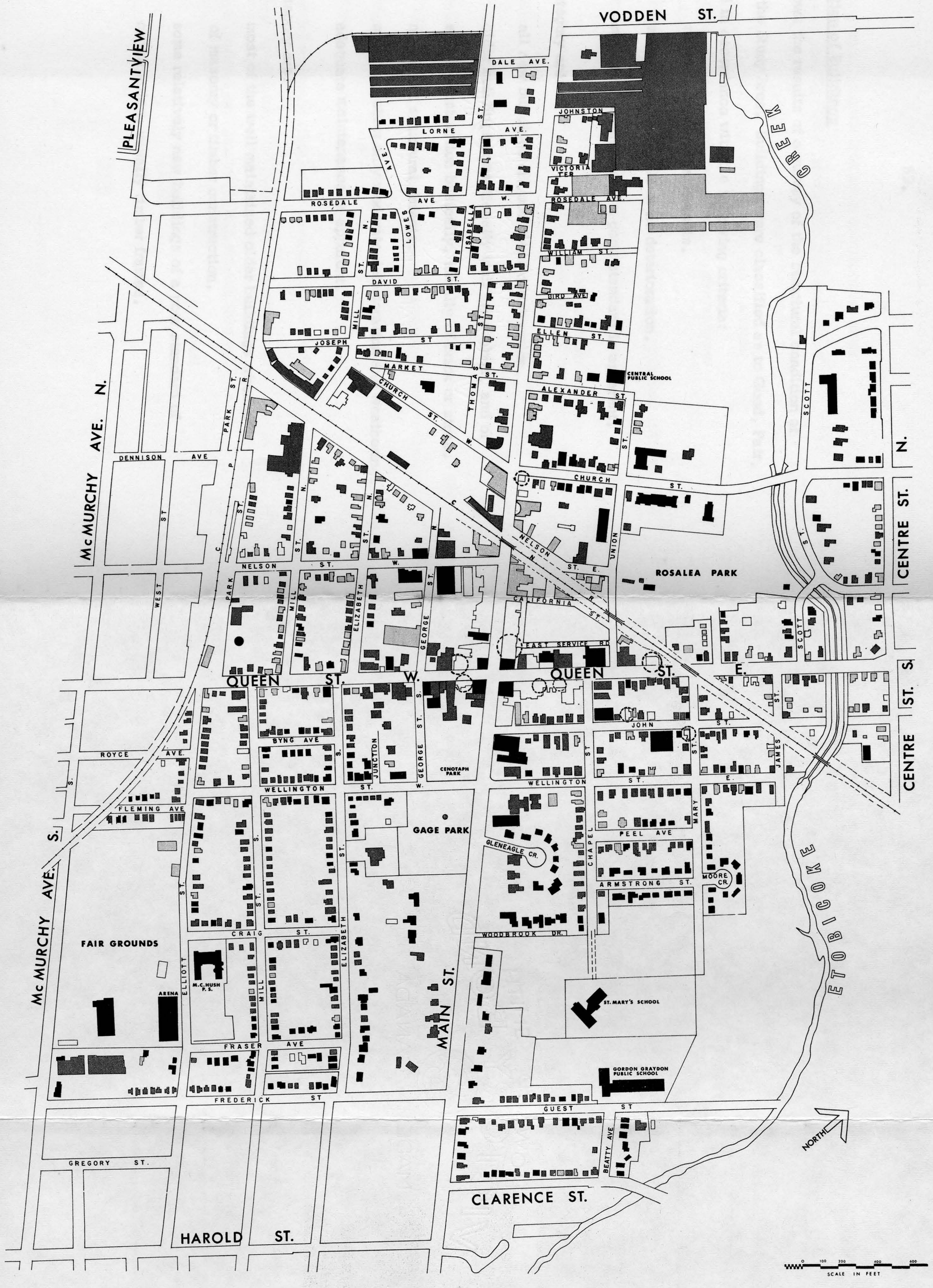


CONDITION OF BUILDINGS 1966

PLAN FOR DOWNTOWN BRAMPTON

PLATE No. A-4

M.M. Dillon & Co Ltd.
Proctor, Redfern, Bousfield & Bacon
E.A. Mitchell Ltd.



CONDITION OF BUILDINGS 1966

■ GOOD

▩ FAIR

▨ POOR

☐ BAD

◌ EXTREMELY DILAPIDATED

A-65574-4

PLAN FOR DOWNTOWN BRAMPTON

M.M. Dillon & Co Ltd. Proctor, Redfern, Bousfield & Bacon E.A. Mitchell Ltd.

PLATE No.
A-4

3. Condition of Buildings

Plate A-4 shows the results of a survey of the structural condition of buildings in the Study Area. Buildings were classified as to Good, Fair, Poor and Bad in accordance with the following criteria:

GOOD - no sign of structural defects.
- materials show little or no deterioration.
- regular maintenance of a good standard is apparent.

Under this category are:-
- all new buildings of good class construction.
- older buildings exceptionally well maintained, and of sound construction basically, usually of brick or stone.

FAIR - no sign of structural defects.
- materials show only moderate deterioration and weathering.
- adequate maintenance is apparent.

Under this category are:-
- most of the well maintained older buildings whether of masonry or timber construction.
- some relatively new buildings of a poor standard of construction, usually timber framed.

POOR - signs of localized structural defects, such as slight sagging in the roof, slight sloping of walls or other supports.

- materials are considerably deteriorated.
- maintenance has been neglected or inadequate.

Under this category are:-

- mostly old buildings where extensive repairs are clearly necessary.

BAD - obvious signs of structural defects such as pronounced sagging in the roof, badly sloping walls or supports, indicating in some cases uneven foundation settlement.

- materials have deteriorated badly.
- maintenance has been either neglected or ineffective due to extreme dilapidation.
- the building appears to be unfit or unsafe for habitation or other normal purposes, or is actually in disuse.
- the need for rebuilding, rather than repairs, suggests itself.

In addition, a number of buildings in especially dilapidated condition were particularly noted.

It will be observed that, except where the railroads and adjacent incompatible uses exert an obvious blighting effect, the residential areas are consistently 'good' to 'fair', particularly south of Wellington Street, north of David Street, and east of Scott Street.

In distinct contrast is the commercial 'core', which contains many buildings rated structurally 'poor', most of the buildings rated as 'bad', and almost all of the especially dilapidated structure. Although the exterior facade at street level tends to mask these conditions, the situation is hardly surprising considering the advanced age of many of the structures. What is possibly more surprising is the generally 'fair' condition of most of the commercial 'frame' uses.

4. Community Facilities

The following information on community facilities was compiled by the Planning Board Staff.

a. **Schools**

The Study Area contains 3 public elementary (K-8) schools and one separate elementary school, the characteristics of which are set out in Table III. There are no high schools in the Study Area.

TABLE III

SCHOOL FACILITIES IN THE STUDY AREA

School	Original Size	Additions	Site Area
Central P.S. Alexander Street 1916	8 class rooms 1 kindergarten	1964 = 1 play room	5.00 acres
McHugh P.S. Elliott Street 1926	7 class rooms 1 kindergarten	1950 = 3 class rooms 1 kindergarten 1955 = 2 class rooms 1964 = 1 play room	2.74 acres
St. Mary's S.S. Chapel Street 1957	5 class rooms 1 kindergarten	1958 = auditorium 4 class rooms 1965 = 2 class rooms	3.95 acres

Table IV shows the relationship between population and school population.

TABLE IV

POPULATION AND SCHOOL POPULATION

School Year	Dec. 31 Total Town Population	Total Public Elementary School Enrollment	% of Tot. Popn.	Total Secondary School Enrollment	% of Tot. Popn.	Total Separate School Enrollment	% of Tot. Popn.
Sept '65	'65 33,874	5,807	17.1	1,891	5.6	1,016	3
1964-65	'64 30,463	5,381	17.6			726) no kindergarten	2.4
1963-64	'63 26,191	4,729	18	1,407	5.4	599)	2.3
1962-63	'62 22,307	3,824	17	1,223	5.5	455)	2
1961-62	'61 19,185	3,201	16.7			585	3
1960-61	'60 17,385	2,904	16.7			409	2.3
1959-60	'59 15,241	2,468	16			390	2.5
1958-59	'58 14,374	2,335	16.5			200	1.4
1957-58	'57 13,518	2,191	16.2			147	1.1
1956-57	'56 13,009	2,248	17.3				
1955-56	'55 11,738	2,043	17.4				

b. Parks and Recreation Facilities

Information on parks and recreation facilities in the Study Area was also compiled by the Planning Board Staff, and this is summarized in Table V.

A wide range of facilities is already available in the major public parks. Open space is available for acquisition adjacent to Etobicoke Creek and north of Rosedale Avenue West, where additional facilities can be provided when required and as funds become available for the purpose. The only major feature not yet provided for is a civic auditorium of some kind.

TABLE V
PARKS AND RECREATIONAL FACILITIES IN THE STUDY AREA

Facility	Type of Equipment
Brampton Recreation Commission	Adult education centre
Brampton Arena	Artificial ice surface, toilet facilities, change rooms, concession booth
Athletic Fields - Rosalea Park - Fairgrounds	Equipped for team sports
Band Shell - Gage Park (stand)	To shelter performing groups with dressing rooms, washrooms and storage area
Baseball Diamonds - Fairgrounds - Rosalea (2) - Kiwanis	Back stops, home plate and properly conditioned surface
Ice Surface (outdoor natural) - Rosalea - Guest Street - St. Mary's S.S.	Level area which is lighted, boarded and water facilities could have a surface for hockey and one for skating
Lacrosse Box - Rosalea Park - Arena	60'x100' cleared area, grassed, boarded, indoor-hard surface as above
Library - Queen Street & Chapel	A building containing printed and pictorial material for public use for the purpose of study, reference and recreation
Pool (outdoor swimming) - Rosalea Park	For swimming, diving, snack bar, washrooms, changing rooms

(cont'd)

TABLE V

PARKS AND RECREATIONAL FACILITIES IN THE STUDY AREA (cont'd)

Facility	Type of Equipment
Pool (wading) - Rosalea - Gage Park	A saucer shaped water container with top, spray or shower heads
Parks (Community) - Rosalea - Kiwanis	An area of land designed to serve the citizens of several neighbourhoods. Should contain active and passive recreational facilities
Parks (Neighbourhood) - Cenotaph - Gage	Passive Band stand and picnic benches
Picnic Area - Gage Park	Tables, washrooms, and shelter
Soft Ball Diamond - Rosalea (2) - McHugh	Backstop, home plate, and properly conditioned surface
Tennis Courts - Rosalea (4)	Surfaced Area 78'x36'

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4. Real Estate Activity

a. The Existing pattern

The study of real estate activity is centred on the Downtown retail area and radiate therefrom approximately three blocks in all directions. The retail section occupies approximately 1/3 of the total Study Area with the remainder being made up of residential housing, mostly quite old, and declining. The average age of the retail outlets is seventy years and homes approximate fifty years or more.

The north westerly portion of the Study Area around Church and Thomas Streets contains some second class commercial outlets, two service stations, a very large mansion type residence, a few good homes and a number of old residences. On the west side of Main Street there are some large homes presently being utilized as rooming houses.

The north easterly portion contains a number of large older homes, a new apartment building, some second class commercial outlets a service station and some small industrial type buildings along the railway.

The Central retail portion contains buildings best described as fair to poor. The majority of the retail outlets have been modernized at street level with only fair quality store fronts and interiors. Apart from the banks, few retail stores have good quality exteriors or interiors, perhaps only thirty or so of the total one hundred and fifty, and of these thirty, few are outstanding. These older commercial structures representing some 80% of the total retail outlets are mainly of brick exterior, some solid and some brick veneer. Heating, electrical and plumbing services are generally only fair.

The rental rate is approximately $6.00 per square foot per annum for new luxury bank institutional type buildings; $5.00 per square foot per annum for first class retail; $4.00 per square foot per annum for second class retail (which would include the majority of the stores on MainStreet) and $3.00 to $4.00 per square foot per annum for the remainder. In the rates quoted, it is customary for landlord to supply heat and water and for tenant to supply electricity, tax escalation, and janitor.

There are few large stores in the Brampton Downtown, even those considered first class are of smallish size. For example, there

are five smallish drug stores all within one hundred yards or so of each other and there are six shoe stores quite close together. The future of the smaller stores will be questionable if and when larger stores open, displaying more diversified products with larger more efficient quarters. A goodly part of Brampton's purchasing dollars goes to surrounding shopping plazas where larger stores and more diversified merchandise are available.

The commercial outlets, for the most part, are of two storey structures having retail stores on the main floor with offices or apartments above. A few buildings have three floors, some of which are utilized as mentioned above but some are unusable except for storage.

In the westerly portion of the Study Area, that is to say, west of the retail section, are mainly older homes, a good many of which are rooming houses and are generally of old rough cast, stucco, or brick construction. There are few large homes in this area, the majority being of six room size. There are a number of newer homes, some twenty years old but they are few.

In that portion of the area to the south and east of the retail section, are a good many large brick homes, many of which are now rooming houses as well as single family homes. The age of these homes approximates sixty years and the quality range is great. There are two Protestant and one Catholic churches in the area as well as a Bell Telephone Company Regional Exchange.

b. Commercial Property Values

Commercial properties have sold well bringing surprisingly high prices in some instances, eg. the location of the Canadian Imperial Bank of Commerce at $48.81 per square foot at the north east corner of the main intersection, and the Halton and Peel Trust recent purchase of 24 Main Street North at $54.80 per square foot. It would appear, however, that these two sales should be considered well above average as the Bank of Commerce purchased the last remaining corner of the main intersection and banks are located in new premises on the other corners. The Halton and Peel purchase is adjacent to a relatively new building which they own and perhaps paid more than a prudent purchaser would, to get land adjacent.

The range for top grade commercial land sites and buildings appears to run from $20.00 to $30.00 per square foot on Main Street from John to the railway overpass. Beginning at John and going north, the values appear to be $20.00 until the peak is reached at the Queen Street intersection (which will be ignored because of the fact that all four corners are now newly built upon). Further north, immediately beyond the four corners, values of $30.00 per square foot prevail through to California Street, where they appear to drop to $25.00 per square foot.

On Queen Street West and beginning at the junction of George Street, on the north side, values of $20.00 per square foot hold through to the main intersection. On the south side, values start at $15.00 per square foot and reach $20.00 per square foot near the main intersection. Continuing past the intersection on the north side, values of $20.00 per square foot prevail through to the Queen's Square Building and then drop to approximately $15.00 per square foot thereafter to Union Street. On the south side east of the main intersection, values of $20.00 per square foot drop to $15.00 per square foot halfway up the block and continue through to Chapel Street. On the south side of Queen Street, east of Chapel Street, values of $8.00 per square foot, drop to $5.00. The north side of Queen Street, east of Union Street has been ignored because of the railway underpass which will take a good deal of this property.

On Nelson Street West values appear to hold at $15.00 per square foot from Main Street to George Street on the south side, and approximately $10.00 per square foot on the north side. West of George Street, that portion of the street used for commercial purposes appears to be at a rate of $10.00 per square foot.

George Street North on the westerly side appears to have a value of $10.00 per square foot. George Street, south of Queen Street, has a peak of $10.00 per square foot at the corner ranging downward therefrom to approximately $5.00 per square foot.

These values are shown on Plate No. A-1

c. Apartment Site Values

There are only two apartment buildings, the Parkside and the Ronald close or within the Detailed Study Area. Both are relatively

new, and land costs were $0.82 and $1.10 per square foot in 1961 and 1964 respectively.

These sites, located at Church and Union Streets, had a coverage of 1.0. Apartment land today, for these same sites would be approximately $1.30 per square foot for 1.0 coverage. The demand is very strong for downtown apartments.

There are many converted older homes made up into quasi apartment units and flats throughout this area and an investigation indicated a per square foot value of approximately $5.00. These are for large eight to twelve room, two and three storey, old brick homes on rather good size lots 6,000 to 7,000 square feet in area. There is a strong demand for rooms and flats.

d. Housing Site Values

The range of values for housing sites, including land and buildings, is from $3.00 to $5.00 per square foot, depending on location and quality. The Elizabeth Street area would average $3.50 per square foot; the south side of John Street averages $4.50 and Wellington Street East from $3.50 to $5.00 per square foot depending on size.

There are a great many rooming houses in this area and some fine old family homes.

The north side of John Street between Main Street and Chapel Street has two sales recorded at $6.50 and $8.50 per square foot in 1964 when a proposed commercial complex was to be constructed running from Queen Street through to John Street. This project did not get off the ground and it is thought that the project was overly optimistic and prices paid premature. There is a decided advantage to properties in this area because of their nearness to Queen Street East and present values are estimated at $6.00 per square foot.

It may be difficult to assemble land throughout the residential area, particularly those rooming houses and duplexes producing income. A good percentage of the larger homes of Brampton used for rooming houses fall within the Study Area and they would be difficult to replace anywhere else in town. Therefore, whoever assembles the land will likely have to pay a premium to displace those people not only from the property itself but from the income that is being produced. It is difficult to estimate what the

premium would be but something in the order of 10% should perhaps be considered.

Those values indicated on Plate A-1 and circled are indicative of residential homes on a residential sized lot. There are very few such parcels in the Study Area. Should this land, which is utilized now mainly as commercial, be available in large parcels, value would be down $2.00 per square foot.

e. General Observations and Conclusions

There are no ethnic groups, as such, attracted to any particular portion of the Study Area although a good percentage of owners are new Canadians.

For the most part, sales were consumated with down payments large enough to hold market value, and it does not appear that premium prices were paid.

There is a preponderence of multi-family use throughout the residential portion which includes roomers, borders, flats, duplexing and converted apartments. Earlier in this report it was mentioned that a premium would have to be considered to displace owners of these multi family residences of 10% due to the fact that similar properties would be in very short supply. Population of Brampton was some 7,000 in 1949 and now totals 35,000, therefore, it is easily seen that the very great percentage of the population lives in homes not yet twenty years old. Since the Detailed Study Area would represent approximately one third of the 1949 Brampton, one can visualize the problem of finding this type of housing for those owners who would prefer to purchase similar accommodation.

There has been little purchasing by speculators in the retail area and almost none in the residential area. The only portion subject to speculation at the moment is George Street South, on the westerly side. These properties were purchased for redevelopment a number of years ago. George Street North is also approaching the development stage. The present lack of water will likely hold back most projects until restrictions are released.

Very few stores are using two stories and this will likely become more prevalent as demand for diversified goods increases and land values increase with resulting rise in rents.

Merchants appear to be doing very well financially, but have been slow to redevelop themselves. That is to say, few merchant owners have done major redevelopment on their own properties, most of the redevelopment has been done by owners who are not merchants. Since land value has not met total value of land and buildings, it is unlikely that anything other than spot retail redevelopment will take place without a motivating force not apparent at this time. Perhaps a contributing factor is the age of the merchants, as the majority are in the older age category and may not desire the change or expense.

It is apparent that existing parking facilities will be inadequate very shortly if indeed they are not already. It appears equally apparent that present facilities could be expanded by building multi-floored units on existing sites from time to time to meet demand.

Should commuter train service come to Brampton, high rise apartment development in the station area should prove to be an ideal location. Even now the location is excellent.

Values for residential properties range from $3.00 to $5.00 per square foot, with the average being about $4.25.

Apartment land is approximately $1,300.00 per suite, which indicates a coverage requirement of close to 3.0. Thus, redevelopment may be expected to be very slow and spotty if present zoning, which permits only 1.0 times coverage, is left static.

Redevelopment will be much quicker if zoning changes allow for up to 3.0 x coverage as there appears to be a vigorous demand for apartments. The retail business sections will expand to meet the demand of increased population.

Tenants are prepared to pay the economic rents for the accommodation required. The Study Area does not appear suited for row housing or maisonettes simply because land is too expensive and there is just not enough land contained in the Study Area.

5. Transportation Aspects

a. Roads

Brampton grew up around a crossroads and even today the intersection of Queen and Main Street, in the centre of the Downtown Area, continues to be the most important intersection for many miles around. No doubt as Brampton develops, other wide streets and major roads will be constructed to service the ever growing traffic, and bypass the congested urban areas and worsening bottlenecks. Over the years however, Queen Street and Main Street have so consolidated their built-in importance, that no amount of additional construction in the coming 20-30 years will be capable of negating this. From the four corners of the Queen/Main intersection, roads radiate north and west to Orangeville and Georgetown, west to Huntsville and the Credit Valley, east to Woodbridge, Thornhill, and the northern fringe of Metropolitan Toronto, and south-east to Port Credit and via Highway No. 401 (MacDonald-Cartier Freeway) to the heart of Metropolitan Toronto. Many of the lesser streets serving the downtown area are short and discontinuous. The most important traffic streets, after Queen and Main, are Mill, Church, Union and Wellington.

The Downtown was formerly enclosed by the C.N. Railway and the Etobicoke Creek on its north, east and south sides, and although the creek has now been re-aligned removing the southern barrier, the road pattern is very cramped within these original barriers.

In addition, the physical characteristics of the older Brampton streets are far below the standards appropriate for to-day's automobiles.

Wellington Street could provide most useful service to Downtown if it was a suitable width and provided with better connections to major streets at its easterly end. Mill Street would be a most useful access street for Downtown were it not for the Queen Street jog, the narrow pavement, and the awkward at-grade railway crossing.

Union Street suffers from a rather primitive railway grade separation and a very difficult approach to Queen Street. Church Street provides some downtown service although, being north of the tracks, is somewhat remote from the focus. The remaining streets in the Downtown Area, Elizabeth, George, Nelson, John, California, Chapel etc. provide service to the adjacent properties and are thus classified as local streets.

The road system generally lacks definition. Plate A-1 shows that Queen Street and Main Street are the only facilities with any degree of continuity.

Traffic Control

The existing signalized intersections in the Downtown are at:

Queen/Main

Queen/George

Main/Clarence

Main/Wellington

Main/Nelson West

Main/Church

Church/Centre

The last mentioned is not warranted on the basis of traffic requirements and was presumably installed in connection with the pedestrian needs at the adjacent high school.

Some peak hour congestion is noticeable at several of these locations, in particular around the Queen/Main intersection. While some improvements to signal equipment and turning are appropriate, the inadequacies are not primarily due to the traffic signals. The permission of parking on sections of Main Street north and south of Queen Street severely hampers north-south traffic movement, and the close (400-ft.) spacing between the Queen/George and Queen/Main signals imposes restrictions on the east-west movements.

c. Transit

Local and medium distance public transportation in Brampton is presently provided by buses.

Within the Town, two buses serve the four quadrants formed by Queen and Main Streets on an "alternative" schedule, providing an hourly service from most parts of the Town to the C.B.D. Such a system involves a lengthy wait between buses and a very indirect journey for many passengers.

From Toronto to Brampton and beyond, the Grey Coach lines provide several buses per day, and have a fairly well patronized service.

Although the C.N.R. runs a passenger train to Toronto and back each day, this facility attracts only about 10 passengers daily.

Parking

In a survey conducted in 1964 some 1249 parking spaces were counted in the Downtown area and at the time this appeared to be adequate to serve the commercial floor space existing in the area. 68% of the spaces were provided in off-street parking lots, 15% were provided by parking meters at the curb, and the remaining 17% were made up with curb spaces around the fringe of the Downtown area.

As far as could be determined in a summer (June) survey, Downtown Brampton was operating adequately on less than three spaces per 1,000 square feet of commercial floor space.

It was noticeable that the turnover was high in spite of poor enforcement of parking regulations. In many places, curb parking was conflicting with traffic movement, indicating the need to restrict curb parking further. Brampton is fortunate to have several municipally operated off-street lots, but it will not be very many years before parking garages will be required to serve this area.

e. Pedestrians

In many respects the major banks on the four corners of the Queen/Main intersection help to establish this as the central focus of the Downtown Area. This focus brings pedestrians, parked vehicles, circulating traffic, and short distance trips which set up conflicts with the traffic carrying function of Queen and Main Streets. Trucks, buses and through trips travelling in all directions often have no alternative but to use either Queen Street or Main Street and contend with congestion and conflicts at the four corners.

The built up road frontages preclude drastic physical improvement to roads. At the same time the inherent importance of

these streets prevents any diversion or blockage which would reorient them entirely towards the Downtown service function and ignore their importance as long distance connections.

It is most fortunate that several stores have already opened their back doors to permit customers to enter from the rear parking lot, and the Queens Square Building contains a restaurant and barber shop with direct access only from the rear parking. This represents the type of development which should be encouraged to relieve the existing streets.

Truck Access and Service

No detailed survey of truck access and service has been undertaken for Brampton but it is apparent that much of the service is haphazard. While some stores are served from the rear, most take their deliveries from the street where the operation conflicts with moving traffic, parked cars, pedestrians, showcases, street furniture and refuse collection. Proper loading bays and garbage pick-up arrangements at the rear of the stores, segregated from other functions, are essential to future plans.

6. Utilities

a. Sanitary Sewers

The existing sanitary sewer system serving the Study Area is shown on Plate 4 in the main text.

The sanitary sewers serving the Detailed Study Area were inspected for location, grade and structural condition since most of the sewers in this area are among the oldest in the Town, ranging in age from 40 to 60 years. As is often the case with very old underground utilities, mapping of the system is incomplete, and therefore, as a corollary to this study, the location of the Downtown sewers were recorded on a special plan of the Detailed Study Area. That plan has been submitted to the Town Engineering Department and does not form part of this report.

Generally, the Detailed Study Area sewers were found to be in fair condition, although some settling-out in manholes indicates low velocities due to flat grades and the need for periodic cleansing. Some reaches of sewer in this area have been designated for replacement, in particular on Queen Street and Main Street where they date back to 1900.

The sanitary sewers serving the General Study Area were not inspected since the future loading is not expected to be as demanding as in the Detailed Study Area. However, some replacements will be required owing to the expected future population increases.

Operation of the existing sanitary sewer system can be simply illustrated by referring to Plate 3.A 1.0 M.I.G.D. Sewage Treatment Plant located onthe Etobicoke Creek at Elizabeth Street treats the sewage emanating from the 6 sanitary drainage areas outlined on Plate 3. The major trunk facility collecting from this area is a 35 year old sewer on Main Street plus a short section on George Street varying in size from 42" diameter at the plant to 18" diameter north of the C.N.R. and at depths ranging from 8' to 30'. This sewer is twinned north of Nelson Street (21" and 12") and north of Church Street (two 12" and one 18") and still further north (one 9", one 10" amd one 18"). The smaller pipes are older and generally in poorer condition.

Areas 2 and 3 flow by gravity to the Main Street trunk. Areas 1, 4, 5 and 6 are pumped.

It can be appreciated that the Main Street Trunk, the backbone of the system, will play a most important role in any redevelopment scheme, since replacement would be costly. For this reason, the trunk was inspected over its complete length.

It was revealed that the sewer and manholes are in good condition and, accordingly, operation should continue providing the capacity is adequate to accommodate future flows.

b. Storm Drainage

The existing storm sewer system serving the Study Area is shown on Plate 6 in the main text.

Surface drainage in the Brampton Area is provided by three watercourses, all draining in a north-south direction as shown on Plate 5. They are the Etobicoke Creek on the east, Fletcher's Creek on the west and Main's Creek down the centre which is a tributary of the Etobicoke Creek. Very early in the history of the Town, sections of culverts were built to enclose Main's Creek since the business district and centre of the Town developed along this watercourse which followed generally the length of Main Street from Church Street to south of Wellington Street. North of Church Street, Main's Creek is

an open watercourse.

In recent years, the various drainage structures have been improved, first under the auspices of the Etobicoke-Mimico Conservation Authority in 1953 when an 84" diameter conduit was constructed from California Street to Wellington Street, and a 6'3" x 6'3" box section from Wellington Street to Woodbrook Drive. In 1966 the conduit was extended by the Metropolitan Toronto and Region Conservation Authority with an 84" diameter tunnel from Woodbrook Drive to Harold Street and a 90" diameter tunnel from Harold Street to the Etobicoke Creek.

Thus the Main's Creek Trunk Storm Sewer forms the spine to the Study Area drainage system and consequently it was inspected for condition and grade. The findings can be synopsized by stating that the old section north of California Street is in very poor condition with deteriorated concrete and a considerable accumulation of solids and debris in the invert. The newer sections south of California Street are in good condition. One point worth noting is that the grade of the stretch of 84" sewer from California Street to Queen Street falls slightly in the opposite direction to flow thus requiring surcharging for operation.

Two other storm sewers in the Detailed Study Area are worth considering. The 36" diameter California Street drain from the Main's Creek Trunk to Rosalea Park was installed in 1964 and is in good condition with adequate capacity. The 36" storm sewer on George Street from the Main's Creek Trunk at Wellington to Nelson Street is about 40 years old but still functioning efficiently although the brick manholes are beginning to show signs of deterioration and numerous ladder rungs are missing. This sewer has capacity for serving the immediate area and should be kept in service although replacement and/or repairs will likely be required before the end of the planning period.

A recently constructed storm sewer on Mary Street serves that road right-of-way only.

Drainage in the rest of the General Study Area is provided by short sections of storm drain of inadequate capacity and depth, open ditches and catchbasins connected to the sanitary sewers. These conditions are not compatible with the envisaged redevelopment.

(c) Water Supply and Distribution

At present the Town of Brampton is supplied with water from wells with a combined capacity of 2.0 M.I.G.D. An agreement with Toronto Township will increase this supply by approximately 2.0 M.I.G.D.

The 1966 average demand in the order of 3.0 M.I.G.D. was met by rigid restrictions, peak operation of the walls and purchases from neighbouring municipalities.

The distribution system serving the Downtown Area is old and the majority of mains on the side streets are 4 inch diameter. Consequently some major main work will be required. A 12 inch main on Main Street North is 75 years old and should be replaced. The 16 inch main on Ellen Street east from Main Street is about 20 years old and in good condition.

Existing storage facilities are comprised of two elevated tanks "floating" on the system, one on Park Street with a capacity of 250,000 I.G. and the other on Rutherford Road with a capacity of 833,000 I.G. In addition, there is an open 1 M.I.G. ground storage reservoir still in service at the water works site north of Town.

APPENDIX 'B'

FUTURE GROWTH ESTIMATES

1. Basic Assumptions

In 1965, the Brampton Planning Board published a "Report on Future Growth for the Town of Brampton and Surrounding Area". This report covered the period 1965 - 1985, and its contents formed the basic land use criteria on which the Brampton Area Transportation Study was based.

That report included the following growth projections and assumptions which have direct bearing on the estimates contained herein:

a. Brampton's population will increase from the current 35,000 to something in the order of 145,000 by 1985. This assumes, of course:

- the continued economic vigour of the Metropolitan Toronto Area.
- annexation of additional land as required including Bramalea.
- availability of essential services.
- continued ability of the municipality to finance growth, one way or another, at the projected rate of 4-5000 persons/year.

b. Commercial land requirements will continue at about 4 acres per 1000 population.

c. The future housing mix will find

- 25% of the population in horizontal multiple and apartment units
- 75% in singles, semis and plexes.

These are adopted for the purposes of this report, with the exception of 'c' above where, we suggest, some modification might be considered.

Tables VI and VII which follow show building activity, as reflected by building permit issuances, for the ten years 1955 - 1964 inclusive for the Study Area, and for the rest of the Town, respectively.

It will be observed that, between 1955 and 1964, a total of 5226 dwelling units of all kinds were built in Brampton. Of these, 1477 or 29% were multiples. Applying av. 3.0 persons per apartment or multiple = 4,500

av. 3.8 persons per single or semi =	14,200
Total	18,700

it will be seen that about 24% of the new residents were housed in rental accommodation.

However, for the last 5 years (ie. 1960 - 1964 incl.) it will be seen that, of some 3,900 units constructed 1,328 or 34% were multiples or apartments.

Applying the same ratios:

av. 3.0 persons per apartment of multiple	=	4,000
av. 3.8 persons per single or semi	=	9,800
		13,800

it will be seen that about 30% of the population were housed in multiples.

It is believed that this trend to rental accommodation will continue, for economic reasons, and that, for the future, it will be more in order to assume at least 35% of the population in apartments or multiples.

2. Growth Forces in the Study Area

The two major growth components for the Study Area will be high density residential uses, and commercial uses (including related institutional uses). Tables VI and VII show that recent lighter density residential and industrial growth is negligible in the Study Area when compared to the rest of the Town and this is hardly surprising. Each of the two major growth elements will be discussed in turn.

TABLE VI

SUMMARY OF BUILDING PERMITS FROM 1955 to 1964

TOTAL STUDY AREA

Year	Singles Semis & plexes units	Apt. units	Retail Personal Floor space	Office Floor space	Hotel and motel units	Industrial Warehouse space
1955	22		4,165	16,097		6,180
56	14		300			400
57	13		14,176	5,160		2,800
58	19		3,118	3,400		
59	15		3,016	8,000		2,400
60	21	149	2,936	10,436		
61	9		27,900	512		5,442
62	12		1,640	5,712		1,680
63	14		1,407	10,235		
64	5	42	6,754	78,239		1,287
Totals	144	191	65,412	137,791	NIL	20,189

TABLE VII

SUMMARY OF BUILDING PERMITS FROM 1955 to 1964

FOR THE TOWN OF BRAMPTON EXCLUDING THE STUDY AREA

Year	Singles Semi and Plexes	Apts Units	Retail Personal Flr. Space. Sq. Ft.	Office Floor Space Sq. Ft.	Hotel and Motel Units	Industrial Warehouse Space Sq. Ft.
1955	135	64	10,885			76,396
1956	117		28,453	1,615	12	137,888
1957	210	2	37,874	275		57,596
1958	180	43	2,710	96		252,779
1959	451	40	12,739	2,845		404,271
1960	144	68	101,003	495		516,370
1961	518	77	80,675			115,443
1962	478	179	22,050	6,300		377,988
1963	928	270	45,024	144	109	589,329
1964	444	543	46,983	16,205		754,068
Totals	3,605	1,286	387,396	27,975	121	3,282,128
Study Area Totals	144	191	65,412	137,791	-	20,189
Total Ten Year Growth	3,749	1,477	452,808	165,766	-	3,302,317

a. Residential

If it can be accepted that 35% of the 20 year population increase will be housed in multiples or apartments, space must be provided for some 39,000 people in such accommodation. In estimating the possible impact on the Study Area, there are simply no meaningful past trend data to assist in determining:

first the proportions who will live in high density apartments as opposed to horizontal multiples.

secondly the proportion of high density apartment dwellers who will be located in the Study Area as opposed to other locations in the municipality. (It is a fairly safe assumption that no horizontal multiples will locate in the Study Area, except near the peripheries, because of land costs, see Appendix 'A')

Accordingly, a series of assumptions must be made, and they are as follows:

i. Of the 39,000 people in rental accommodation, 2/3 or 26,000 will be housed in high density apartments.

ii. Of that 26,000, 40% or about 10,400 will be located in the Study Area.

iii. The high densities contemplated should yield an average of 2.5 - 2.6 persons per suite, and, accordingly, some 4,500 suites will be required.

iv. Assuming densities of 130 suites/acre (3 x coverage) will be required to permit land assemblies, about 35 acres will be required for high density apartments.

v. In order to allow for difficulties in land assemblies, and to keep land costs in line, a surplus of at least 50% will have to be provided for, giving a total additional land requirement for high density apartments of about 50 -55 acres. Existing apartments cover about 5 acres.

In conclusion, the Downtown Plan should provide for high density apartments on about 55-60 acres. It must be recognized of course, that provision must be made for continuing growth beyond the time period covered by the Plan.

b. Commercial

In estimating the impact of future growth on commercial floor space in the Downtown, there are a number of variables to consider.

Of all of the commercial components described in Appendix 'A', personal and professional services, banks and financial houses and business offices and community services are regarded as the most vigorous growth elements for the future. Table VII, for example, shows that over 80% of the office space in the period 1955 - 1964 was built in the Study Area. The Brampton Downtown is now solidly entrenched as the multi-function business centre in the region, and there appears to be no potential rival for that role on the horizon.

The 'frame' uses so called are showing a distinct preference for highway frontage outside the Downtown where larger tracts at relatively lower costs are available. A hotel, or motor hotel, however, should be a possibility for the Downtown.

Tables VI and VII also show that the past decade's increase in the Downtown retail component, while sizable, represented only about 13% of the total retail increase in the Town over the same period. It is not at all unusual, of course, for a downtown to experience a reduction in its proportionate share of retail floor space as a community expands, simply because of the inevitable rise of convenience centres at peripheral locations.

The larger plazas, of course, also make inroads on the shopping goods business, and presently there are at least three potential major competitors in sight - Bramalea Town Centre, Highway 10-Steeles, and Highway 10 - Burnhamthorpe. Such are the times that others may be seriously proposed at any stage. Which of these will develop, to what extent, and when cannot be predicted here, but it is apparent that any of them are large enough to overshadow Brampton Downtown as a shopping goods centre. With unfettered potential for design, free parking, easy access, and no problems of land assembly, they are in a far more favourable position to attract a department store (or stores), the major absentee from the present commercial picture. Once in operation, the large plazas can offer the customer heated and air conditioned surroundings, and employ co-ordinated advertising to offset the traditional vigorous and competitive merchandising service and specialty lines offered by the Downtown.

Much of Brampton is so recent that the Downtown will not be afforded the time to establish customer loyalties among the new residents.

On the other hand, the success of the Study Area as a total business centre guarantees a continuing place in the Downtown for a substantial retail component. Quite apart from the buying power of their employees, the other business generate 'secondary' shopping trips, the primary purpose of which may have been a visit to a professional or business office, bank, community service, etc. In this context, the still unsettled local government question adds to the uncertainty. The disappearance from the Downtown scene of the municipal administration and the offices of related boards and commissions would not be without effect on the number of 'secondary' trips.

Finally, it must be observed that an increase of 10,000 in the population of the Study Area would obviously stimulate retail sales in the Downtown, including the demand for convenience goods.

All of these conflicting generalities noted, there still remains the problem of developing a commercial growth estimate for the

Downtown as a target to work toward. What follows is simply that. It is in no sense a prediction, it is not even a projection because there are no reliable past trend data to project, and no systematic way to account for all the variables the future holds. The assumptions are therefore quite arbitrary, and where proven erroneous by events, will have to be adjusted from time to time.

The 'Report on Future Growth' previously referred to, estimated total commercial jobs in 1985 at about 15,000. Currently about 37% of all commercial jobs are located in the Study Area. Assuming a decline in this proportion by about half, the Downtown would have about 2,700(3) commercial jobs by 1985. Having in mind the expected increase in the proportion of office employment, employee density is assumed to increase to 350(3) sq. ft. per worker. This would yield a total commercial floor space in the Downtown of about 950,000 sq. ft. by 1985.

Further assuming an increase in the average gross floor space index to between .6 and .7 (say .65)(3), about 33 acres of commercial land will be required. Add to this a surplus of about 35% to allow for vacancies and land assembly problems, and the total 1985 commercial land requirement in the Downtown becomes slightly over 50 acres.

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(3) The Report on Future Growth assumed 2050, 360, and .5 respectively, thus yielding a somewhat lower 1985 land requirement.